

massacrusetts Forward DOT MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

ARLINGTON

MASSACHUSETTS AVENUE - ROUTE 2A/3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS		
MASS.		1	164		
PROJECT FILE NO. 604687					

TITLE SHEET & INDEX

MASSACHUSETTS AVENUE - ROUTE 2A/3 POND LANE TO CAMBRIDGE CITY LINE

PLAN AND PROFILE OF

IN THE TOWN OF

ARLINGTON MIDDLESEX COUNTY

FEDERAL AID PROJECT NO.

THE MASSACHUSETTS HIGHWAY DEPARTMENT 1988 STANDARD SPECIFICATIONS FOR HIGHWAYS THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING; AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK. AS AMENDED WILL GOVERN.

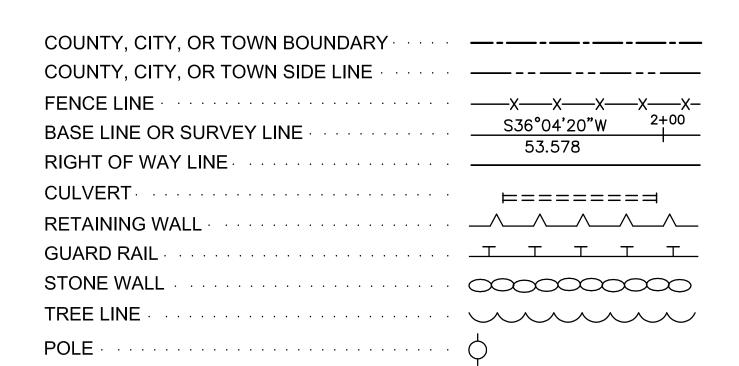
TITLE SHEET & INDEX **GENERAL NOTES** LEGEND AND ABBREVIATIONS **KEY PLAN & BORING LOCATION** SURVEY CONTROL PLANS TYPICAL SECTIONS CONSTRUCTION PLANS -----GRADING AND TIE PLANS DRAINAGE AND UTILITY PLANS DRAINAGE AND UTILITY DETAILS TRAFFIC LEGEND AND NOTES TRAFFIC SIGN AND PAVEMENT MARKING PLANS TRAFFIC SIGN SUMMARY SHEETS TRAFFIC SIGNAL PLANS TRAFFIC SIGNAL DETAILS TEMPORARY TRAFFIC CONTROL PLANS LIGHTING LEGEND, GENERAL NOTES AND ABBREVIATIONS LIGHTING PLANS ----- LIGHTING DETAILS 98-108 -----LANDSCAPE PLANS 109-111 -----LANDSCAPE DETAILS 112-114 ----- WHEELCHAIR RAMP AND DRIVEWAY DETAILS ----- CONSTRUCTION DETAILS CROSS SECTIONS

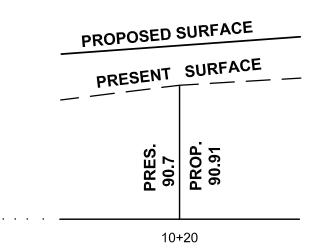
CONVENTIONAL SIGNS

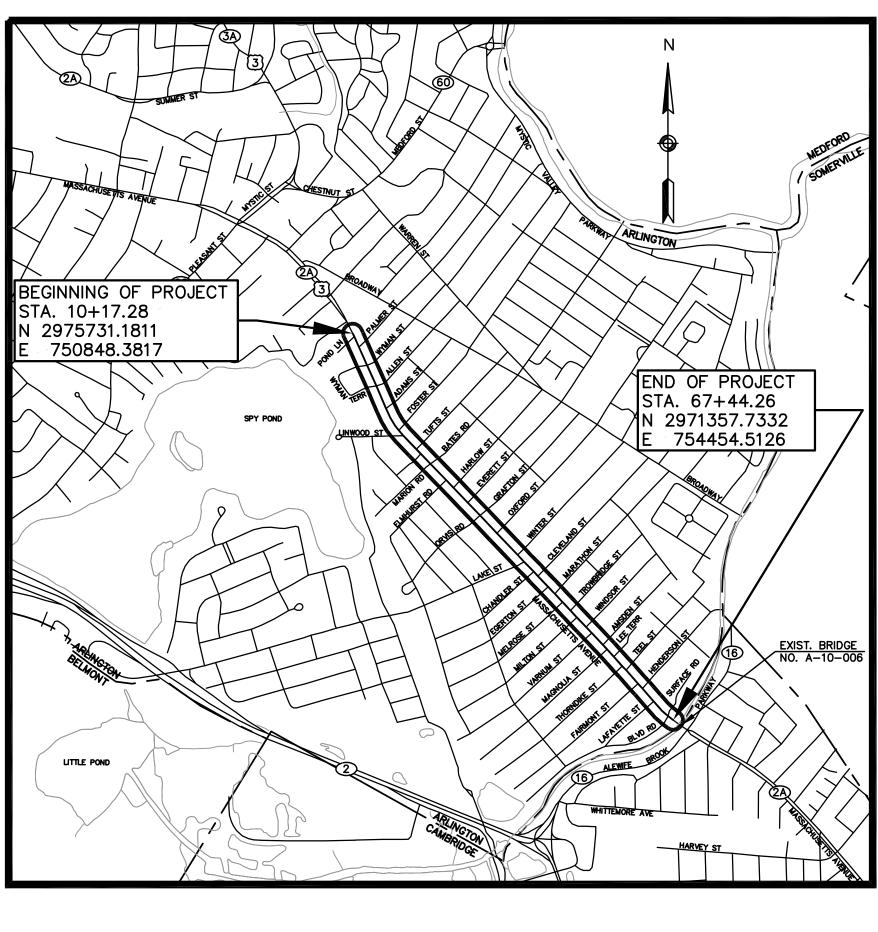
INDEX

SHEET NO.

DESCRIPTION







SCALE 1" = 1000'

LENGTH OF PROJECT = 5,726.98 FEET = 1.08 MILES

DESIGN DESIGNATION

DESIGN SPEED ADT (2008) 16,500 ADT (2028) 19,100 10.4% T (PEAK HOUR) T (AVERAGE DAY) 1,200 FUNCTIONAL CLASSIFICATION URBAN PRINCIPAL ARTERIAL

FEBRUARY 29, 2012

75% SUBMISSION

ENGINEERS

FAY, SPOFFORD & THORNDIKE

5 BURLINGTON WOODS BURLINGTON, MA 01803



RECOMMENDED FOR APPROVAL

APPROVED

DATE

DATE

CHIEF ENGINEER

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR

DIVISION ADMINISTRATOR

[Rayno_B] - February 27, 2012 - 3:00pm - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Title.dwg [001 - Title Sheet and Index]

FS&T DWG. NO.

ARLINGTON **MASSACHUSETTS AVENUE - ROUTE 2A/3**

STATE	FED. AID PROJ. NO.		TOTAL SHEETS		
MASS.		2	164		
DDO IECT EILE NO 604687					

GENERAL NOTES

SURVEY NOTES

BASEMAPPING PROVIDED BY SURVEY AND MAPPING CONSULTANTS (SMC). 170 FORBES ROAD, SUITE 207, BRAINTREE, MA 02184.

- THIS PLAN IS BASED ON RECORD DESCRIPTIONS, ADDITIONAL REFERENCES, OTHER SOURCES, AND AN ON-THE-GROUND, INSTRUMENT SURVEY MADE SEPTEMBER -DECEMBER, 2008.
- 2. COORDINATES, IN U.S. SURVEY FEET, ARE IN THE MASSACHUSETTS COORDINATE SYSTEM, MAINLAND ZONE, CORS ADJUSTMENT (NAD 83/CORS), AS DETERMINED BY SMC'S PROJECT NETWORK OF G.P.S. OBSERVATIONS AND TOTAL STATION TRAVERSING: THIS NETWORK IS BASED UPON THE KEY NET GPS VIRTUAL REFERENCE STATION SYSTEM. OBSERVED SEPTEMBER 29, 2008, AT STATIONS 1-5 SHOWN HEREON.
- GRID TICKS ARE SHOWN AT 200 FT. INTERVALS.
- 3. ELEVATIONS. IN U.S. SURVEY FEET. ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), AS DETERMINED BY SMC'S PROJECT NETWORK OF G.P.S. OBSERVATIONS, TOTAL STATION TRAVERSING AND DIFFERENTIAL LEVELING:

THIS NETWORK IS BASED ON THE FOLLOWING MASSACHUSETTS GEODETIC SURVEY (MAGS) CONTROL STATIONS. THE PUBLISHED ELEVATIONS OF WHICH WERE TRANSFORMED FROM THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29) TO NAVD 88 USING CORPSCON V6.01 SOFTWARE:

STATION A 38 ~ A COPPER PLUG IN A HEADWALL FOR THE WHITTEMORE STREET RAILROAD UNDERPASS; ELEV. = 29.12 FT. (NAVD 88) = 29.93 FT. (NGVD 29).

STATION 635 ~ A MONEL RIVET IN A GRANITE CAPSTONE OF THE MASSACHUSETTS AVENUE BRIDGE OVER ALEWIFE BROOK; ELEV. = 10.48 FT. (NAVD 88) = 11.29 FT. (NGVD 29).

- 4. THE SIDELINES OF MASSACHUSETTS AVENUE AND OF THE INTERSECTING WAYS WERE RETRACED FROM THE REFERENCED PLANS AND SURVEYED MONUMENTATION.
- 5. THE LOT LINES OF PROPERTIES ABUTTING SAID WAYS WERE COMPILED FROM THE TOWN OF ARLINGTON'S DIGITAL PARCEL MAPPING, AND THEIR LOCATIONS ARE APPROXIMATE.
- 6. THE PUBLIC OR PRIVATE STATUS OF THE DEPICTED WAYS IS ACCORDING TO A LISTING PROVIDED BY THE TOWN OF ARLINGTON PUBLIC WORKS DEPARTMENT. ENGINEERING DIVISION.
- 7. PROPERTY OWNERSHIPS AND TITLE CITATIONS ARE FROM LISTINGS PROVIDED BY THE TOWN OF ARLINGTON ASSESSORS IN SEPTEMBER, 2008.
- 8. SUBSURFACE UTILITY LINES AND FEATURES. AS SHOWN HEREON, WERE COMPILED FROM FIELD EVIDENCE AND/OR AVAILABLE RECORD INFORMATION AND THEIR LOCATIONS ARE ONLY APPROXIMATE. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.

SMC ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

BEFORE CONSTRUCTION, THE APPROPRIATE UTILITIES MUST BE CONSULTED.

BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40). CALL "DIG SAFE" 1-888-DIG-SAFE. (888-344-7233).

BEFORE CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE TOWN OF ARLINGTON SEWER AND WATER DEPARTMENT. (781 - 316 - 3310)

THE CONTRACTOR SHALL BE REQUIRED TO CONTACT NATIONAL GRID WHEN ENCROACHMENT IS MADE ON THEIR LINES AND SHALL FOLLOW NECESSARY REPAIR AND NOTIFICATION REQUIREMENTS WHEN TRACER WIRES ARE BROKEN.

GENERALLY, THE LINES IN THE PUBLIC AND PRIVATE WAYS ARE SHOWN AND THE LATERAL CONNECTIONS SERVICING INDIVIDUAL USERS ARE NOT SHOWN.

THE SUFFIX (R) DENOTES SUBSURFACE UTILITIES WHICH WERE COMPILED FROM RECORD INFORMATION ONLY. NOTE THAT INFORMATION REGARDING SUBSURFACE TELECOMMUNICATIONS LINES WHICH HAS BEEN PROVIDED BY ONLY FOR CURRENT DESIGN RELATED TO THE DEPICTED SITE: USERS OF THIS DRAWING WHO WISH TO SHOW SAID TELECOMMUNICATIONS INFORMATION IN THEIR OWN PRODUCTS MUST OBTAIN PERMISSION TO DO SO DIRECTLY FROM

VERIZON-NEW ENGLAND IS CONFIDENTIAL AND IS TO BE USED VERIZON-NEW ENGLAND.

GENERAL NOTES

- 1. EXISTING GROUND SURFACES SHOWN ON PLANS, PROFILES AND CROSS SECTIONS ARE BASED UPON DATA OBTAINED BY FIELD SURVEYS.
- 2. THE LOCATIONS OF EXISTING SUBSURFACE STRUCTURES, SUCH AS SEWERS, WATER MAINS, DRAINS AND OTHER UTILITIES ARE APPROXIMATE ONLY AND THE ENGINEER DOES NOT GUARANTEE THEIR NUMBER OR LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE EXCAVATING.
- 3. EXISTING WATER BOXES AND CURB STOPS, FIRE ALARM, SEWER AND SURFACE DRAIN MANHOLE FRAMES AND COVERS, CATCH BASIN FRAMES AND GRATES AND OTHER CASTINGS SHALL BE ADJUSTED TO LINE AND/OR GRADE AS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.
- 4. ALL GAS GATES, ELECTRIC MANHOLES AND TELEPHONE MANHOLES WITHIN THE LIMITS OF WORK SHALL BE ADJUSTED BY THE OWNING AGENCY. ALL GAS, ELECTRIC, TELEPHONE AND CATV WORK SHALL BE DONE BY THE OWNING AGENCY. THE CONTRACTOR SHALL NOTIFY THE OWNING AGENCIES TO ADJUST AND/OR RELOCATE THESE STRUCTURES TO AVOID IMPACTING THE CONTRACTOR'S SCHEDULE OF OPERATIONS.
- 5. ALL PROPOSED DRAINAGE CONNECTIONS TO EXISTING STRUCTURES WILL BE INCLUDED IN THE COST OF THE NEW PIPE.
- 6. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY COMPANIES DOING WORK IN THE SAME AREA. THE CONTRACTOR SHALL ALLOW THE UTILITY COMPANIES AND THEIR REPRESENTATIVES TO ADJUST AND/OR INSTALL THEIR SYSTEMS WITHIN TOWN / STATE OWNED STREETS AND EASEMENTS.
- 7. NO EXISTING PUBLIC UTILITY STRUCTURES SHALL BE ABANDONED AND/OR DISMANTLED WITHOUT AUTHORIZATION FROM THE ENGINEER.
- 8. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES WHEN THE INSTALLATION OF DRAINAGE LINES AND STRUCTURES ARE IN CLOSE PROXIMITY TO EXISTING UTILITY POLES.
- 9. CURB SHALL BE FURNISHED AND SET AT LOCATIONS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.
- 10. CONSTRUCT DRIVEWAYS AND WALKS AS SHOWN ON THE PLANS AN OR AS REQUIRED BY THE ENGINEER.
- 11. EXISTING GRANITE CURB AND EDGING SUITABLE FOR REUSE WITHIN THE PROJECT SITE SHALL BE REMOVED AND RESET IN ACCORDANCE WITH THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

- 12. SAW CUT EXISTING BITUMINOUS CONCRETE ROADWAYS, CEMENT CONCRETE SIDEWALKS AND BITUMINOUS CONCRETE DRIVEWAYS AS SHOWN ON THE PLANS AND AT THE PROPOSED MATCH LINE.
- 13. WHERE THE NEW CONSTRUCTION COINCIDES WITH PRESENT TRAVELED WAYS...
 - THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THE TEMPORARY TRAFFIC CONTROL PLANS AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR WORK ZONES.
 - THE CONTRACTOR SHALL PERFORM HIS WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH AND INCONVENIENCE TO BUSINESS CONCERNS AND ABUTTERS, ON ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM.
 - THE CONTRACTOR SHALL NOT BE ALLOWED TO PARK EQUIPMENT OR STOCKPILE EQUIPMENT OR MATERIAL ON THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE.
 - THE CONTRACTOR SHALL MAINTAIN SAFE AND RESPONSIBLE ACCESS TO AND FROM ABUTTING PROPERTY, PRIVATE WAYS, DRIVEWAYS AND ALL ALLEYS AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
- 14. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- 15. UNLESS OTHERWISE INDICATED ON THE PLANS OR REQUIRED BY THE ENGINEER, THE LIMIT OF WORK SHALL BE THE BACK OF EXISTING SIDEWALK. ANY DISTURBED LAWN AREAS ALONG THE BACK OF SIDEWALK SHALL BE LOAMED AND SEEDED, AS REQUIRED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- 16. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- 17. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- 18. THE CONTRACTOR SHALL RESTORE ANY EXISTING SURFACE PAVEMENTS AND TURF WHICH IS TO REMAIN THAT IS DISTURBED BY THE PROPOSED WORK AND SHALL PATCH ALL HOLES RESULTING FROM THE REMOVAL OF FOUNDATIONS WITH MATERIALS SIMILAR TO THE EXISTING.
- 19. ALL ACCESSIBLE ROUTES. WALKWAYS. CURB CUTS. RAMPS. SIDEWALKS. DRIVEWAY OPENINGS. CLEARANCES AND SLOPE TOLERANCES SHALL CONFORM WITH THE ARCHITECTURAL ACCESS BOARD (AAB), 521 CMR AND MASSHIGHWAY CONSTRUCTION AND TRAFFIC STANDARD DRAWINGS.
- 20. ITEMS LABELED "REM" SHALL BE REMOVED AND DISCARDED BY CONTRACTOR.
- 21. BEFORE START OF ANY WORK ON THE SITE, PRECEEDING THE ARRIVAL OF EQUIPMENT, MATERIALS, OR VEHICLES TO THE SITE, AND PRIOR TO THE COMMENCEMENT OF ANY CLEARING ON THE SITE, THE CONTRACTOR AND ARBORIST SHALL ARRANGE A PRECONSTRUCTION TREE INVENTORY CONFERENCE ON THE SITE WITH THE ENGINEER AND REPRESENTATIVE TOWN TREE WARDENS TO IDENTIFY TREES AND SHRUBS THAT ARE TO BE PROTECTED OR REMOVED AND REVIEW APPROVED PROTECTION MEASURES. NO CLEARING OR PRUNING SHALL BE DONE WITHOUT A CLEAR UNDERSTANDING OF EXISTING CONDITIONS TO BE PRESERVED.
- 22. THE CONTRACTOR SHALL PROTECT EXISTING SURVEY MONUMENTS AND SHALL RESET ANY MONUMENTATION DISTURBED BY HIS OPERATIONS.
- 23. ALL PAVEMENT DEEMED UNSATISFACTORY BENEATH THE PROPOSED MILLING DEPTH SHALL BE REMOVED AND REPLACED TO PROVIDE A SUITABLE BASE CONDITION FOR THE NEW TOP COURSE PAVEMENT.
- 24. WHERE EXISTING SUNKEN TRENCH PAVEMENTS ARE ENCOUNTERED, THE AFFECTED AREA SHALL BE SAWCUT AND REPAIRED FOLLOWING FULL DEPTH PAVEMENT DESIGN AS SHOWN IN THE PAVEMENT NOTES ON SHEET NO. 7.

FS&T DWG. NO.

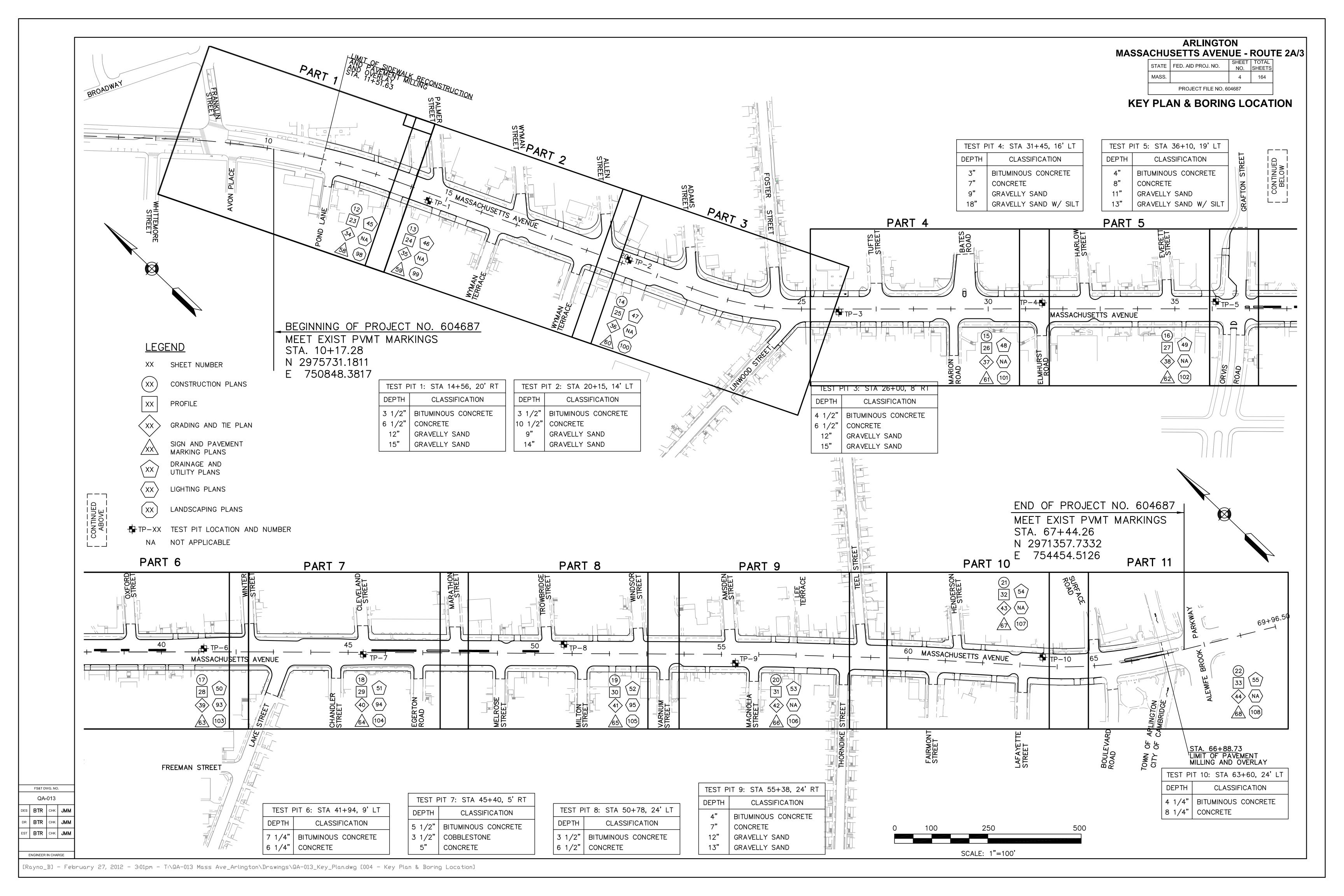
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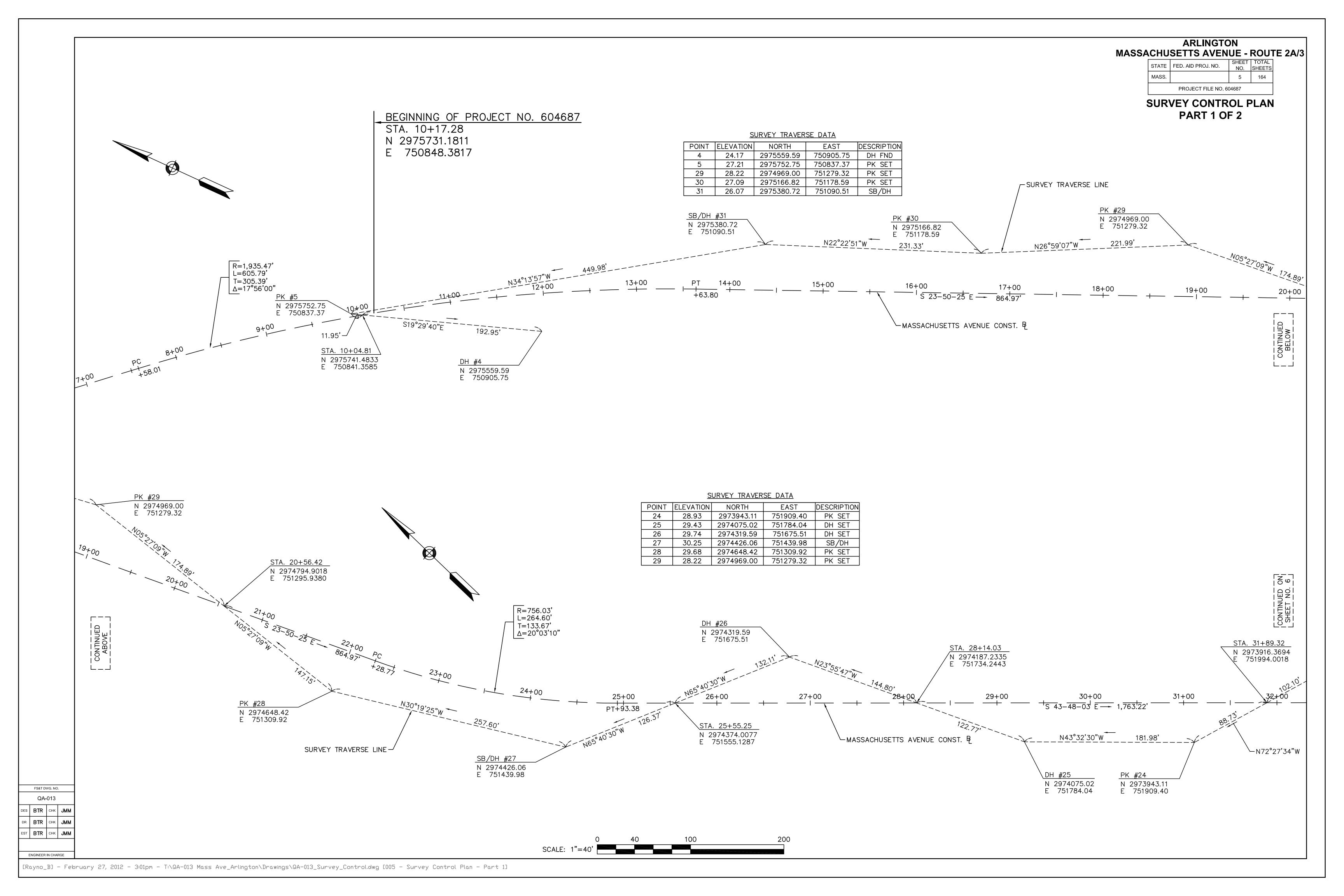
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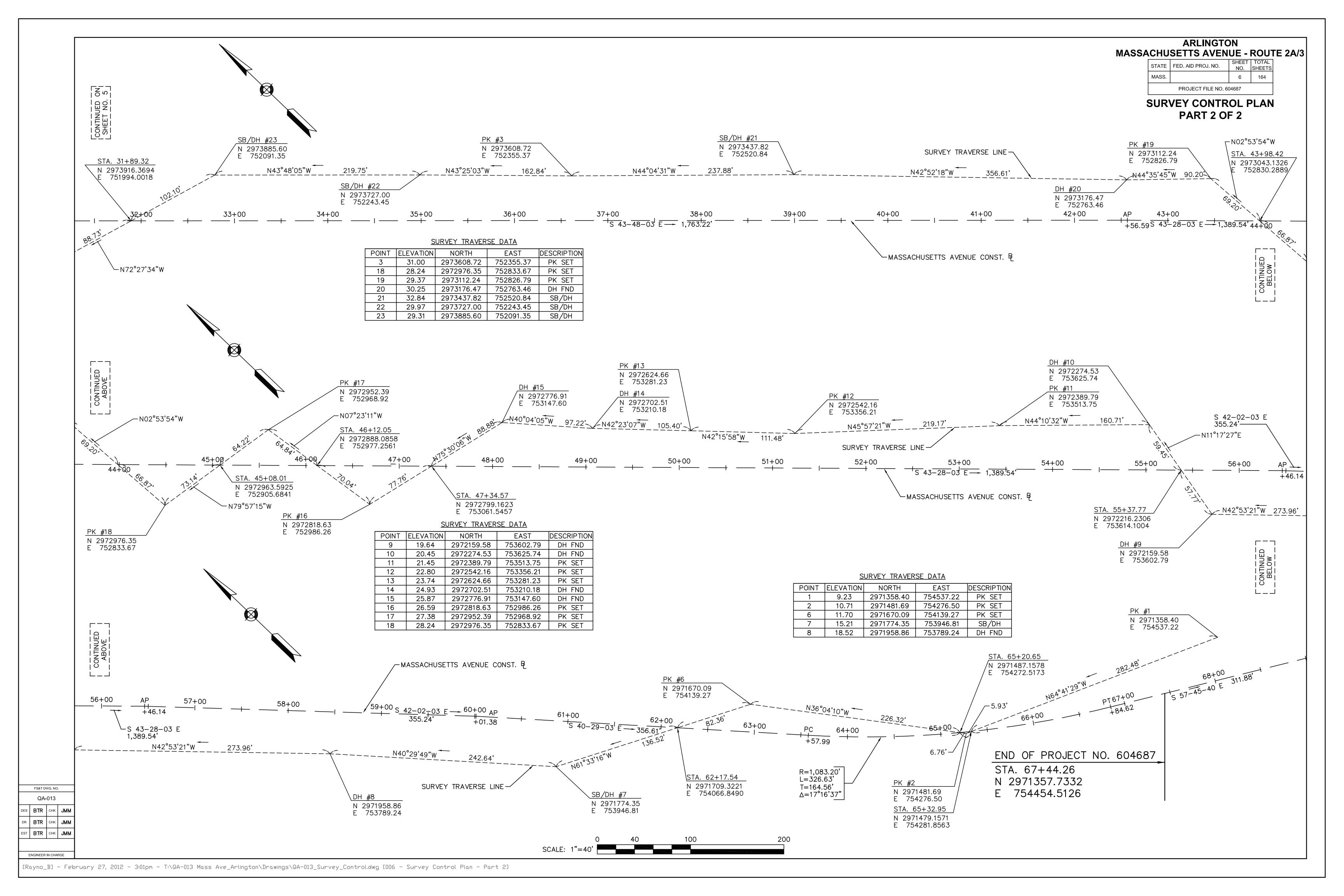
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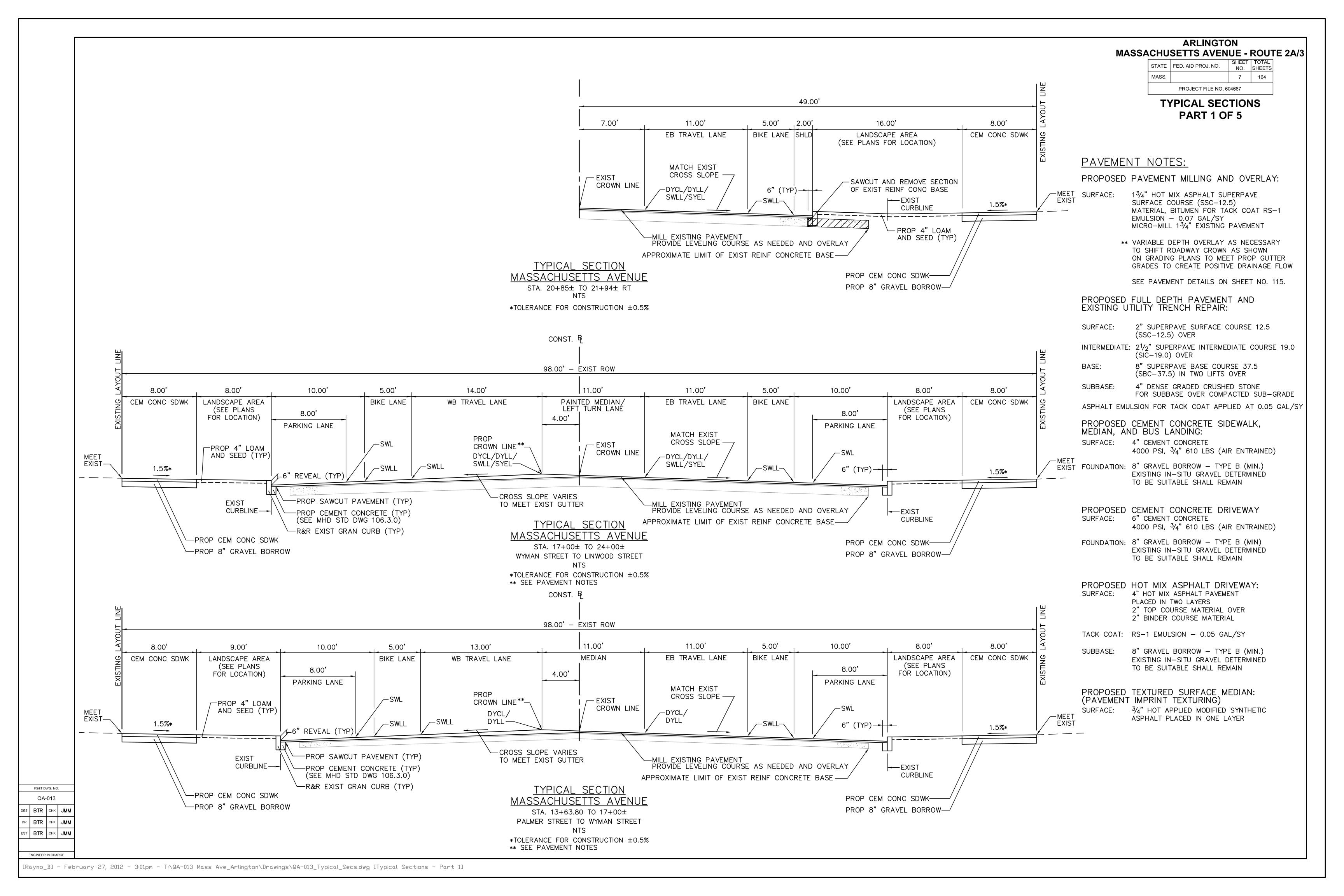
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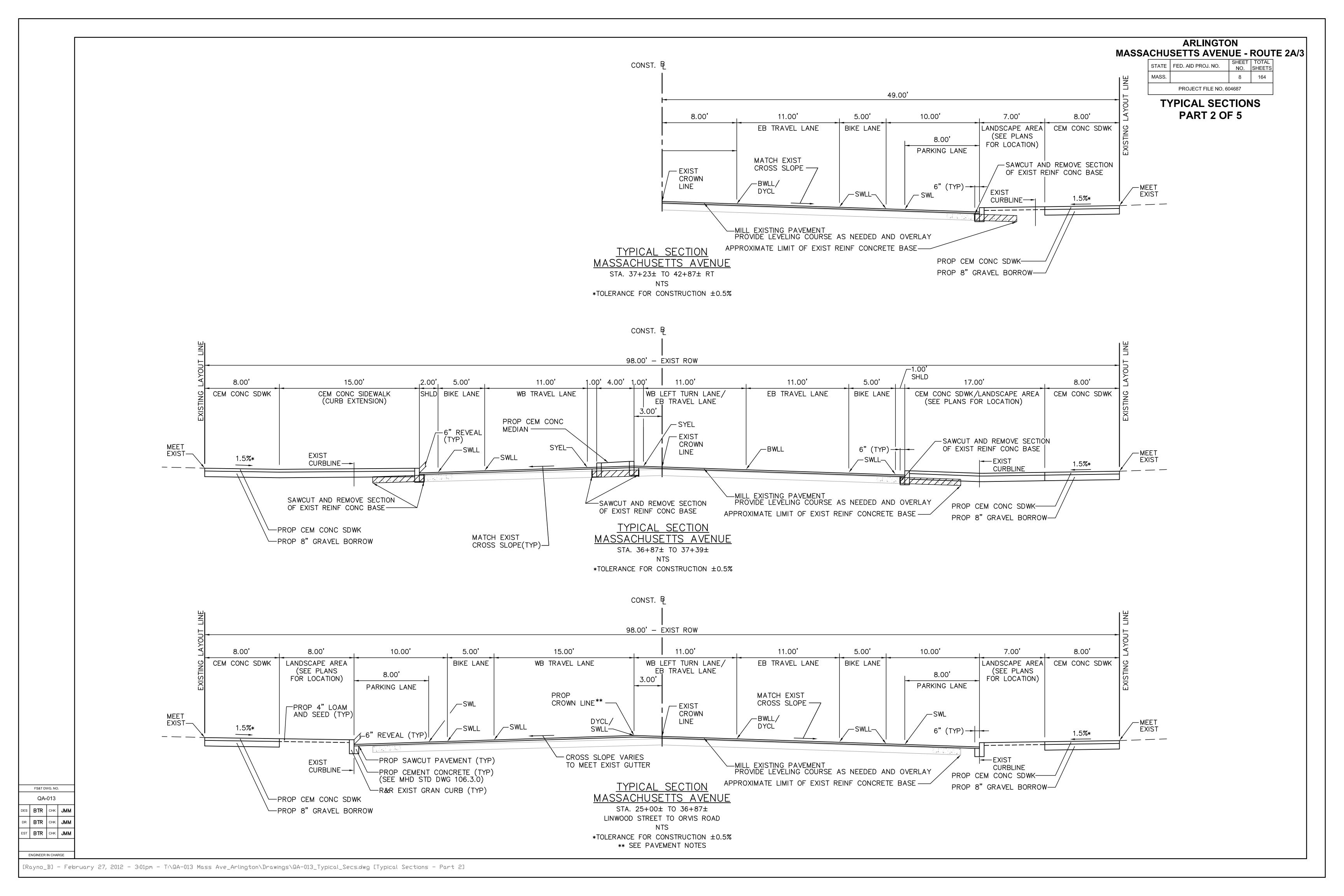
				<u>ABBREVIATIONS</u>				MASS	ARLINGTON ACHUSETTS AVENUE - RO
AADT AC	ANNUAL AVERAGE DAILY TRAFFIC ASHALTIC CONCRETE	E EB	EXTERNAL EAST BOUND	MH MHB	MANHOLE MASSACHUSETTS HIGHWAY BOUND	SRW SSD	STONE RETAINING WALL STOPPING SIGHT DISTANCE		STATE FED. AID PROJ. NO. SHEET TOTAL
ACCM PIPE		ELEC	ELECTRICAL	MP	METAL PIPE	ST	STREET		MASS. 3 164
ADT	AVERAGE DAILY TRAFFIC (TITLE SHEET)	ELEV (OR EL)	ELEVATION	MPH	MILES PER HOUR	STA	STATION		PROJECT FILE NO. 604687
AP APPR	ANGLE POINT APPROACH	EMB ENT	EMBANKMENT ENTRANCE	NB N /F	NORTH BOUND NOW OR FORMERLY	SURF SW	SURFACING OR SURFACE SIDEWALK	1 =	GEND AND ABBREVIAT
BC	BOTTOM OF CURB	EOP	EDGE OF PAVEMENT	NÍC	NOT IN CONTRACT	T	TANGENT DISTANCE OF CURVE/TRUCK		GLIND AND ADDICEVIATI
BD BIT CONC	BOUND BITUMINOUS CONCRETE	EPLP ESMT	ESCUTCHEON PIN IN LEAD PLUG EASEMENT	OHW PB	OVERHEAD WIRE	TAN	PERCENTAGE (TITLE SHEET) TANGENT		
BIT CONC	BASELINE	EXC	EXCAVATION	PC	POINT OF CURVATURE	TBM	TEMPORARY BENCHMARK		
BLDG	BUILDING	EXIST (OR EX)	EXISTING	PCC	POINT OF COMPOUND CURVATURE	TC	TOP OF CURB		
BLSF BM	BORDERING LAND SUBJECT TO FLOODING BENCH MARK	FAS FB	FEDERAL—AID SECONDARY FIRE BOX	PERM	PERMANENT POINT OF INTERSECTION	TCC	TRAFFIC CONTROL CABINET TELEPHONE	IFGEND - PRO	OPOSED PLAN SYMBOLS
BMA	BITUMINOUS MACADAM	FL (OR FE)	FLOW LINE	PK	CONCRETE NAIL	TEMP	TEMPORARY	<u>LLOLIID III</u>	OF OOLD FEATO STRIBOLS
ВО	BY OTHERS	FLDSTN	FIELDSTONE	<u> </u>	NE) PROPERTY LINE	TLO	TOWN LAYOUT LINE		
BR BRW	BRIDGE BRICK RETAINING WALL	FND GAR	FOUNDATION GARAGE	POC POT	POINT ON CURVE POINT ON TANGENT	TP TPB	TURNING POINT TRAFFIC PULL BOX		PROPOSED TREE TRUNK PROTECT
BS	BRICK STEPS	GBM	GRANITE BLOCK MONUMENT	PRC	POINT OF REVERSE CURVATURE	TR	TOP OF RAIL		
BSW	BACK OF SIDEWALK	GC	GRANITE CURB	PROJ	PROJECT	TR SIG	TRAFFIC SIGNAL	\bigotimes	TREE TO BE REMOVED
BW BW	BUTTERFLY VALVE BARBED WIRE	GD GG	GROUND GAS GATE	PROP PT	PROPOSED POINT OF TANGENCY	TRANS TSC	TRANSITION TRAFFIC SIGNAL CONDUIT		TREE TO BE REMOVED
C	COMMUNICATION	Gl	GUTTER INLET	PVGC	POINT OF VERTICAL GRADE CHANGE	TYP	TYPICAL	LENGTH, SIZE & TYPE OF MATERIAL	
CB	CATCH BASIN	GIP	GALVANIZED IRON PIPE	PVI	POINT OF VERTICAL INTERSECTION	UB	UTILITY BOX		PROPOSED DRAINAGE
CBCI CCM	CATCH BASIN WITH CURB INLET CEMENT CONCRETE MASONRY	GR GRAN	GUARD RAIL GRANITE	PVMT PVC	PAVEMENT POINT OF VERTICAL CURVATURE	UGUB UP	UNDERGROUND UTILITY BOX UTILITY POLE	DRAIN PIPE LENGTH, SIZE &	
CEM	CEMENT	GRAV	GRAVEL	PVT	POINT OF VERTICAL TANGENCY	V	SPEED (USUALLY DESIGN SPEED)	TYPE OF MATERIAL	DDODOCED WATER MAIN
CHH	COMMUNICATION HANDHOLE	GRD	GUARD	PWW	PAVED WATERWAY	VAR	VARIABLE	WATER PIPE	PROPOSED WATER MAIN
CIP	CURB INLET CAST IRON PIPE	GS GV	GRANITE STEPS GATE VALVE	PY R	POLYETHELENE RADIUS OF CURVATURE	VC VCP	VERTICAL CURVE VITRIFIED CLAY PIPE	LENGTH, SIZE & TYPE OF MATERIAL	
Ę	CENTER LINE	HDR	HEADER, CULVERT ENDWALL, DR HEA		RECORD	VERT	VERTICAL	TYPE OF MATERIAL SEWER PIPE	PROPOSED SEWER MAIN
¢์ CONST	CENTER LINE OF CONSTRUCTION	HDW	HEADWALL	ŘĆ	REINFORCED CONCRETE	W/	WITH	SEWEK PIPE	
CL CLF	CLASS (CONCRETE, EXCAVATION, ETC.) CHAINLINK FENCE	HES HI	HIGH EARLY STRENGTH (CONCRETE) HEIGHT OF INSTRUMENT	RCP RD	REINFORCED CONCRETE PIPE ROAD	WCR WB	WEST BOUND WHEELCHAIR RAMP		PROPOSED HAY BALES AND SII
CMP	CORRUGATED METAL PIPE	HMA	HOT MIX ASPHALT	RDWY	ROADWAY	WD	WOOD	LENGTH, TR. SIG. COND.	TRAFFIC SIGNAL CONDUIT
CO	COUNTY	НО	HOUSE	RDWY	ROADWAY	WF	WOOD FENCE		
COBD CONC	COUNTY BOUND CONCRETE	HOR HWY GD	HORIZONTAL HIGHWAY GUARD	REINF RR	REINFORCED RAILROAD	WG WIP	WATER GATE WROUGHT IRON PIPE	\otimes	MANHOLE-ABANDON
CONST	CONSTRUCT(ION)	HYD	HYDRANT	RT	RIGHT	WM	WATER METER/WATER MAIN		MANHOLE-ADJUST TO FINISHED
CP	CONCRETE PIPE	IP	IRON PIN		ALL) RETAINING WALL	WRW	WOOD RETAINING WALL		
CR GR CS	CROWN GRADE CONCRETE STEPS	П	INTERSECTION OF SLOPES OR PROFIL GRADE LINES	LE S SB	SIGN STONE BOUND	WS X-SECT	WOOD STEPS CROSS SECTION	● MH	MANHOLE
CSP	CORRUGATED STEEL PIPE	JCT	JUNCTION	SBD	SOUTH BOUND	Λ 3201	ONOGO GEOTION	▼ CB	CATCH BASIN
CULV	CULVERT	K	RATIO OF DHV TO ADT (DESIGN)	SD	SUBDRAIN				CATOU DACINI A CUIDD INLET
D	DIRECTIONAL PERCENTAGE OF DHV (TITLE SHEET)	L I B	LENGTH OF CURVE LEACHING BASIN	SEC SECTS	SECTION SECTIONS (END SECTIONS FOR PIPES)			CBCI	CATCH BASIN & CURB INLET (SQUARE FRAME)
Δ	DELTÀ ANGLE	LP	LIGHT POLE	SF	STOCKADE FENCE			■ N	,
D. A	(CENTRAL ANGLE OF HORIZONTAL CURVE)	LT	LEFT	SH	SHEET			<u>DI</u>	DROP INLET
DA DHV	DRAINAGE AREA DESIGN HOURLY VOLUME	LVC M	LENGTH OF VERTICAL CURVE MIDDLE ORDINATE	SHLD SHLO	SHOULDER STATE HIGHWAY LAYOUT LINE			GI	GUTTER INLET
DI	DROP INLET	MB	MAILBOX	SK	SKEW				CATCH DACIN AD ILICT
DIP	DUCTILE IRON PIPE	MED	MEDIAN	SMH	SEWER MANHOLE				CATCH BASIN,ADJUST TO FINISHED GRADE
DII				CDE	CTONE FOR DIDE ENDS				TO FINISHED GRADE
DH DR	DRILL HOLE DRIVE		LECEND _ EVIC	SPE STINIC DI ANI SYMBOLS	STONE FOR PIPE ENDS				
DH DR	DRILL HOLE		<u>LEGEND — EXIS</u>	STING PLAN SYMBOLS		LINDE	EDCDOLIND WATER LINE		CATCH BASIN-ABANDON
DH DR	DRILL HOLE DRIVE			STING PLAN SYMBOLS		———— UNDE	ERGROUND WATER LINE		
DH DR	DRILL HOLE DRIVE			ROCK/LEDGE			ERGROUND WATER LINE		CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE,
DH DR	DRILL HOLE DRIVE			ROCK/LEDGE	——————————————————————————————————————	———— UNDE	RGROUND GAS LINE		CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE
DH DR	DRILL HOLE DRIVE	RIGID OR FLEXIBLE)		ROCK/LEDGE	——————————————————————————————————————	———— UNDE		LOCATION LINE NO ACCESS OR ACCESS	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE,
DH DR	DRILL HOLE DRIVE	RIGID OR FLEXIBLE)	NO. OF POLE & TYPE OF UTILITY GUY	ROCK/LEDGE TILITY POLE: TELEPHONE, P	——————————————————————————————————————	UNDE	RGROUND GAS LINE		CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE
DH DR	DRILL HOLE DRIVE		NO. OF POLE & TYPE OF UTILITY O- GUY O-	ROCK/LEDGE TILITY POLE: TELEPHONE, P GUY POLE UTILITY POLE/LIGHT POLE	——————————————————————————————————————	UNDE	RGROUND GAS LINE	LOCATION LINE NO ACCESS OR ACCESS LOCATION LINE COUNTY OR TOWN	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE
DH DR	DRILL HOLE DRIVE		NO. OF POLE & TYPE OF UTILITY O- GUY O-	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE OUTILITY POLE/LIGHT POLE LIGHT POLE	——————————————————————————————————————	UNDE UNDE UNDE	RGROUND GAS LINE		CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE
DH DR	DRILL HOLE DRIVE		NO. OF POLE & TYPE OF UTILITY GUY FL	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE OUTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT		UNDE UNDE UNDE UNDE	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE	LOCATION LINE COUNTY OR TOWN	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE
DH DR	DRILL HOLE DRIVE		NO. OF POLE & TYPE OF UTILITY O- GUY O-	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE OUTILITY POLE/LIGHT POLE LIGHT POLE	——————————————————————————————————————	UNDE UNDE UNDE UNDE	RGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE	LOCATION LINE COUNTY OR TOWN ADJ	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST
DH DR	DRILL HOLE DRIVE 51 ROADWAY EDGES TYPE OF SURFACE PAVED WALKS & DRIVES (R TYPE OF WALK) UNPAVED WALKS & DRIVES		NO. OF POLE & TYPE OF UTILITY GUY FL DIAMETER & TYPE	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE OUTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES		UNDE UNDE UNDE UNDE	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE	LOCATION LINE COUNTY OR TOWN ADJ ADJBO	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS
DH DR	DRILL HOLE DRIVE TYPE OF SURFACE PAVED WALK TYPE OF WALK UNPAVED WALKS & DRIVES WALK TYPE OF WALK PAVED GUTTER (TYPE) CURB-EDGING CURBING, EDGING	(GRAVEL, DIRT, ETC	NO. OF POLE & TYPE OF UTILITY GUY	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE OUTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT	POWER	UNDE UNDE UNDE UNDE UNDE OVER	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST ADJUST BY OTHERS ABANDON
DH DR	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK TYPE OF WALK UNPAVED WALKS & DRIVES WALK TYPE OF WALK PAVED GUTTER (TYPE) CURB-EDGING CURBING, EDGING	(GRAVEL, DIRT, ETC	NO. OF POLE & TYPE OF UTILITY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE OUTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES		UNDE UNDE UNDE UNDE UNDE OVER	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER
DH DR	DRILL HOLE DRIVE 51 TYPE OF SURFACE PAVED WALKS & DRIVES (R 51 TYPE OF WALK WALK WALKS & DRIVES (R TYPE OF WALK WALK WALKS & DRIVES WALK WALK WALK WALKS & DRIVES TYPE OF WALK WALK WALKS & DRIVES WALK WALK WALK WALKS & DRIVES CURPANDE CURPANDE CURPAND CURPAND CURPAND CONTROL OF CARD CONTROL O	(GRAVEL, DIRT, ETC	NO. OF POLE & TYPE OF UTILITY GUY	ROCK/LEDGE UTILITY POLE: TELEPHONE, P GUY POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE	POWER	UNDE UNDE UNDE UNDE UNDE OVER	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE
DH DR	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK TYPE OF WALK UNPAVED WALKS & DRIVES (R TYPE OF WALK PAVED WALKS & DRIVES WALKS & DRIVES TYPE OF WALK WOOD GUARD RAIL, STEEL	(GRAVEL, DIRT, ETC	NO. OF POLE & TYPE OF UTILITY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE OUTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE	—————————————————————————————————————	UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES EH BASIN & CURB INLET HOLE (LABEL TYPE)	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING
DH DR	DRILL HOLE DRIVE	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE	ROCK/LEDGE UTILITY POLE: TELEPHONE, POLY POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE	—————————————————————————————————————	UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI MANH	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES EH BASIN & CURB INLET HOLE (LABEL TYPE) ER GATE	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE
DH DR	DRILL HOLE DRIVE 51 TYPE OF SURFACE PAVED WALKS & DRIVES (R 51 TYPE OF WALK WALK WALKS & DRIVES (R TYPE OF WALK WALK WALKS & DRIVES WALK WALK WALK WALKS & DRIVES TYPE OF WALK WALK WALKS & DRIVES WALK WALK WALK WALKS & DRIVES CURPANDE CURPANDE CURPAND CURPAND CURPAND CONTROL OF CARD CONTROL O	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY - - - - - - - - - - - - -	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE OUTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE	—————————————————————————————————————	UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI HH MANH WATER HYDR	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE EHEAD WIRES EH BASIN & CURB INLET HOLE (LABEL TYPE) ER GATE ANT	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHER
DH DR	DRILL HOLE DRIVE	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE	ROCK/LEDGE UTILITY POLE: TELEPHONE, POLY POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE	—————————————————————————————————————	UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI HH MANH WATER HYDR	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE EHEAD WIRES EH BASIN & CURB INLET HOLE (LABEL TYPE) ER GATE ANT	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & DISCARD
DH DR	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK WOOD GUARD RAIL, STEEL STEEL POSTS NO. OF CABLES TYPE OF WALK	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF STATE OR R.R. LAYOUT	ROCK/LEDGE TING PLAN SYMBOLS ROCK/LEDGE UTILITY POLE: TELEPHONE, P GUY POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE	—————————————————————————————————————	UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI MANH WATER HYDR GAS	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE EHEAD WIRES EH BASIN & CURB INLET HOLE (LABEL TYPE) ER GATE ANT	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHER REMOVE & DISCARD REMOVE & RESET
DH DR	DRILL HOLE DRIVE	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF STATE NAME OF STATE NAME OF CITY, TOWN OR COUNTY (DATE)	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOLE	— W - G - S - S - S - D - E - T - OHW E (LAYOUT) JNDARY LINE — G - W - G - CE	UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI MANH WATER HYDR GAS CATCI	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES EH BASIN & CURB INLET HOLE (LABEL TYPE) ER GATE ANT GATE	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&R	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & RESET REMOVE & RESET REMOVE & RESET
DH DR	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK WOOD GUARD RAIL, STEEL STEEL POSTS NO. OF CABLES TYPE OF WALK	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF STATE NAME OF STATE NAME OF CITY, TOWN OR COUNTY (DATE) (STATE HIGHWAY LAYOUT)	ROCK/LEDGE TING PLAN SYMBOLS ROCK/LEDGE UTILITY POLE: TELEPHONE, P GUY POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE	— W - G - S - S - S - D - E - T - OHW E (LAYOUT) JNDARY LINE — G - W - G - CE	UNDE UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI MANH WATER HYDR GAS CATCI SCB DEEP	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES TH BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE TH BASIN	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&R R&RBO R&R	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK
DH DR	DRILL HOLE DRIVE 51 TYPE OF SURFACE PAVED WALKS & DRIVES (R 51 TYPE OF WALK WALK WALKS & DRIVES (R TYPE OF WALK WALK WALKS & DRIVES WALK WALK WALK WALKS & DRIVES UNPAVED WALKS & DRIVES PAVED GUTTER CURBING, EDGING WOOD GUARD RAIL, STEEL IN STEEL POSTS MO. OF CABLES GUARD RAIL, TRIANGULAR (CONCRETE GUARD POSTS) A A A A A A A A CONCRETE GUARD POSTS BALANCED STONE WALL RETAINING WALL	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF STATE NAME OF STATE NAME OF CITY, TOWN OR COUNTY (DATE)	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOLE		UNDE UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI H MANH WATEF HYDR GAS GAS GAS GAS GAS LEACI	ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN HING BASIN	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&R	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK RETAIN
DH DR	DRILL HOLE DRIVE 51 TYPE OF SURFACE PAVED WALKS & DRIVES (R 51 TYPE OF WALK WALKS & DRIVES (R TYPE OF WALK WALKS & DRIVES WALK WALK WALKS & DRIVES UNPAVED WALKS & DRIVES PAVED GUTTER CURBING, EDGING WOOD GUARD RAIL, STEEL ON STEEL POSTS NO. OF CABLES GUARD RAIL, TRIANGULAR OF CABLES GUARD RAIL, STEEL POSTS NO. OF CABLES GUARD RAIL, STEEL POSTS A A A A A A A A A A A A A A A A A A A	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF STATE NAME OF STATE NAME OF CITY, TOWN OR COUNTY (DATE) (STATE HIGHWAY LAYOUT)	ROCK/LEDGE TING PLAN SYMBOLS ROCK/LEDGE UTILITY POLE: TELEPHONE, POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOLE STATE HIGHWAY LAYOUT LINE	OWER	UNDE UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI MANH WATER HYDR GAS	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN DHOLE	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&R R&RBO R&R	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK
DH DR	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK TYPE OF WALK TYPE OF WALK WALKS & DRIVES UNPAVED WALKS & DRIVES WALKS & DRIVES UNPAVED WALKS & DRIVES TYPE OF WALK TYPE OF WALK WOOD GUARD RAIL, STEEL IN STEEL POSTS WOOD GUARD RAIL, TRIANGULAR OF CONCRETE GUARD POSTS A A A A A A CONCRETE GUARD POSTS BALANCED STONE WALL RETAINING WALL DOUBLE FACED WALL	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF STATE OR R.R. LAYOUT NAME OF CITY, TOWN OR COUNTY SB SBDH	ROCK/LEDGE UTILITY POLE: TELEPHONE, POUY POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOUNTY STONE BOUND STONE BOUND W/ DRILL HOLE	OWER	UNDE UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI MANH WATER HYDR GAS	ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN HING BASIN	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&R R&RBO R&R	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK RETAIN EASEMENT (TEMP. OR PERM.)
DH DR	DRILL HOLE DRIVE 51 TYPE OF SURFACE WALK 51 TYPE OF WALK UNPAVED WALKS & DRIVES (R TYPE OF WALK WALKS & DRIVES WALK SEDGING UNPAVED GUTTER CURBING, EDGING NO. OF RAILS WOOD GUARD RAIL, STEEL IS STEEL POSTS MO. OF CABLES GUARD RAIL, TRIANGULAR OF NO. OF CABLES CONCRETE GUARD POSTS BALANCED STONE WALL RETAINING WALL DOUBLE FACED WALL POINTED WALL	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY L GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF STATE CO. COMM., CITY, TOWN OR R.R. LAYOUT NAME OF CITY, TOWN OR COUNTY SB SBDH MHB	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOLE STONE BOUND STONE BOUND STONE BOUND MASS. HIGHWAY BOUND	OWER	UNDE UNDE UNDE UNDE UNDE UNDE UNDE UNDE	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN HING BASIN DHOLE	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&RBO R&R R&RBO R&R R&RBO R&S RET TEMP. OR PERM.(TYPE)	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & DISCARD REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK RETAIN EASEMENT (TEMP. OR PERM.)
DH DR	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK TYPE OF WALK TYPE OF WALK WALKS & DRIVES UNPAVED WALKS & DRIVES WALKS & DRIVES UNPAVED WALKS & DRIVES TYPE OF WALK TYPE OF WALK WOOD GUARD RAIL, STEEL IN STEEL POSTS WOOD GUARD RAIL, TRIANGULAR OF CONCRETE GUARD POSTS A A A A A A CONCRETE GUARD POSTS BALANCED STONE WALL RETAINING WALL DOUBLE FACED WALL	(GRAVEL, DIRT, ETC BEAM GUARD, WOOD CONCRETE POSTS	NO. OF POLE & TYPE OF UTILITY GUY	ROCK/LEDGE UTILITY POLE: TELEPHONE, POUY POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOUNTY STONE BOUND STONE BOUND W/ DRILL HOLE	OWER	UNDE UNDE UNDE UNDE UNDE UNDE UNDE UNDE	ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN HING BASIN DHOLE P INLET ERETE HEADWALL (END) FOR CULVERTS	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&RBO R&R R&RBO R&R	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & DISCARD REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK RETAIN EASEMENT (TEMP. OR PERM.)
DH DR	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK UNPAVED WALKS & DRIVES (R TYPE OF WALK UNPAVED WALKS & DRIVES WOOD GUARD RAIL, STEEL IN STEEL POSTS NO. OF CABLES UNDAVED WALKS & DRIVES WOOD GUARD RAIL, STEEL IN STEEL POSTS UNDAVED WALKS & DRIVES CURBING, EDGING WOOD GUARD RAIL, STEEL IN STEEL POSTS OUARD RAIL, TRIANGULAR OU NO. OF CABLES CONCRETE GUARD POSTS BALANCED STONE WALL RETAINING WALL DOUBLE FACED WALL POINTED WALL POINTED WALL FENCE	(GRAVEL, DIRT, ETC	NO. OF POLE & TYPE OF UTILITY GUY L GUY FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF STATE CO. COMM., CITY, TOWN OR R.R. LAYOUT NAME OF CITY, TOWN OR COUNTY SB SBDH MHB	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOLE STONE BOUND STONE BOUND STONE BOUND MASS. HIGHWAY BOUND	— W - G - G - S - G - D - G - G - G - G - G - G - G - G	UNDE UNDE UNDE UNDE UNDE UNDE UNDE UNDE	ERGROUND GAS LINE ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN HING BASIN DHOLE	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&RBO R&R R&RBO R&C RET TEMP. OR PERM.(TYPE)	CATCH BASIN-ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & DISCARD REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK RETAIN EASEMENT (TEMP. OR PERM.) BORING LOCATION AND NUMBER
DH DR	DRILL HOLE DRIVE 51 TYPE OF SURFACE WALK 51 TYPE OF WALK UNPAVED WALKS & DRIVES (R TYPE OF WALK WALKS & DRIVES WALK SEDGING UNPAVED GUTTER CURBING, EDGING NO. OF RAILS WOOD GUARD RAIL, STEEL IS STEEL POSTS MO. OF CABLES GUARD RAIL, TRIANGULAR OF NO. OF CABLES CONCRETE GUARD POSTS BALANCED STONE WALL RETAINING WALL DOUBLE FACED WALL POINTED WALL	(GRAVEL, DIRT, ETC	NO. OF POLE & TYPE OF UTILITY GUY S.) FL DIAMETER & TYPE (TO SCALE) OR NAME OF STATE NAME OF STATE NAME OF CITY, TOWN OR COUNTY SB SBDH MHB CO.BD. TOWN OR CITY BD.	ROCK/LEDGE OUTILITY POLE: TELEPHONE, POLE UTILITY POLE/LIGHT POLE LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOU STATE HIGHWAY LAYOUT LINE STONE BOUND STONE BOUND STONE BOUND COUNTY BOUND COUNTY BOUND	POWER	UNDE UNDE UNDE UNDE UNDE UNDE UNDE OVER BCI CATCI MANH WATER HYDR GAS	ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN HING BASIN DHOLE P INLET ERETE HEADWALL (END) FOR CULVERTS	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&RBO R&R R&RBO R&R R&RBO R&S RET TEMP. OR PERM.(TYPE)	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & DISCARD REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK RETAIN EASEMENT (TEMP. OR PERM.)
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	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK 51 TYPE OF WALK 51 TYPE OF WALK WOOD GUARD RAIL, STEEL IS STEEL POSTS NO. OF CABLES WOOD GUARD RAIL, TRIANGULAR OF CONCRETE GUARD POSTS A A A A A A A CONCRETE GUARD POSTS BALANCED STONE WALL TYPE CONCRETE GUARD WALL RETAINING WALL DOUBLE FACED WALL A NUMBER MASS. TRIANGULATION STATE WOODS OR BRUSH (TREE LIE	(GRAVEL, DIRT, ETC	NO. OF POLE & TYPE OF UTILITY GUY	ROCK/LEDGE OTILITY POLE: TELEPHONE, POLE UTILITY POLE/LIGHT POLE LIGHT POLE LIGHT POLE LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOUND STONE BOUND STONE BOUND STONE BOUND COUNTY BOUND TOWN OR CITY BOUND	POWER	UNDE UNDE UNDE UNDE UNDE UNDE UNDE UNDE	ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN HING BASIN DHOLE P INLET ERETE HEADWALL (END) FOR CULVERTS E HEADWALL (END) FOR CULVERTS	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&RBO R&R R&RBO R&S RET TEMP. OR PERM.(TYPE) ADJ ADJ ADJ ADJ ADJ ADJ ADJ ADJ ADJ AD	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & DISCARD REMOVE & RESET REMOVE & RESET REMOVE & STACK RETAIN EASEMENT (TEMP. OR PERM.) BORING LOCATION AND NUMBER TEST PIT LOCATION AND NUMBER WHEELCHAIR RAMP PROPOSED LIGHT POLE AND FIX
	DRILL HOLE DRIVE TYPE OF SURFACE TYPE OF WALK 51 TYPE OF WALK 51 TYPE OF WALK 51 UNPAVED WALKS & DRIVES (R TYPE OF WALK) WOOD GUARD RAIL, STEEL IS STEEL POSTS WOOD GUARD RAIL, TRIANGULAR (CONCRETE GUARD POSTS) A A A A A A CONCRETE GUARD POSTS BALANCED STONE WALL TYPE DOUBLE FACED WALL POINTED WALL A NUMBER MASS. TRIANGULATION STATE WOODS OR BRUSH (TREE LIE	(GRAVEL, DIRT, ETC	NO. OF POLE & TYPE OF UTILITY GUY STATE CO. COMM., CITY, TOWN OR R.R. LAYOUT NAME OF STATE NAME OF CITY, TOWN OR COUNTY NAME OF CITY, TOWN OR COUNTY NAME OF CITY, TOWN OR COUNTY (DATE) (STATE HIGHWAY LAYOUT) SB SBDH MHB CO.BD. TOWN OR CITY BD. TYPE MATERIAL	ROCK/LEDGE OTILITY POLE: TELEPHONE, POLE UTILITY POLE/LIGHT POLE LIGHT POLE FLOODLIGHT TREES PROPERTY LINE STATE BOUNDARY LINE COUNTY COMMISSIONER'S LINE CITY OR TOWN LAYOUT LINE RAILROAD SIDELINE CITY, TOWN, OR COUNTY BOUND STONE BOUND STONE BOUND STONE BOUND COUNTY BOUND TOWN OR CITY BOUND	POWER	UNDE UNDE UNDE UNDE UNDE UNDE UNDE UNDE	ERGROUND SEWER LINE ERGROUND DRAIN LINE ERGROUND ELECTRIC LINE ERGROUND TELEPHONE LINE ERGROUND TELEPHONE LINE ERHEAD WIRES H BASIN & CURB INLET HOLE (LABEL TYPE) R GATE ANT GATE H BASIN SUMP CATCH BASIN HING BASIN DHOLE P INLET ERETE HEADWALL (END) FOR CULVERTS E HEADWALL (END) FOR CULVERTS	LOCATION LINE COUNTY OR TOWN ADJ ADJBO ABAN F&C F&G REMODEL CIT CTE REM R&DBO R&D R&R R&RBO R&R R&RBO R&C RET TEMP. OR PERM.(TYPE)	CATCH BASIN—ABANDON WATER GATE WATER GATE OR GAS GATE, ADJUST TO FINISHED GRADE STATE HIGHWAY LAYOUT LINE COUNTY OR TOWN LAYOUT LINE ADJUST ADJUST BY OTHERS ABANDON FRAME & COVER FRAME & GRATE REMODEL CHANGE IN TYPE CONNECT TO EXISTING REMOVE REMOVE & DISCARD BY OTHERS REMOVE & DISCARD REMOVE & RESET REMOVE & RESET REMOVE & RESET REMOVE & STACK RETAIN EASEMENT (TEMP. OR PERM.) BORING LOCATION AND NUMBER TEST PIT LOCATION AND NUMBER WHEELCHAIR RAMP PROPOSED LIGHT POLE AND FIX

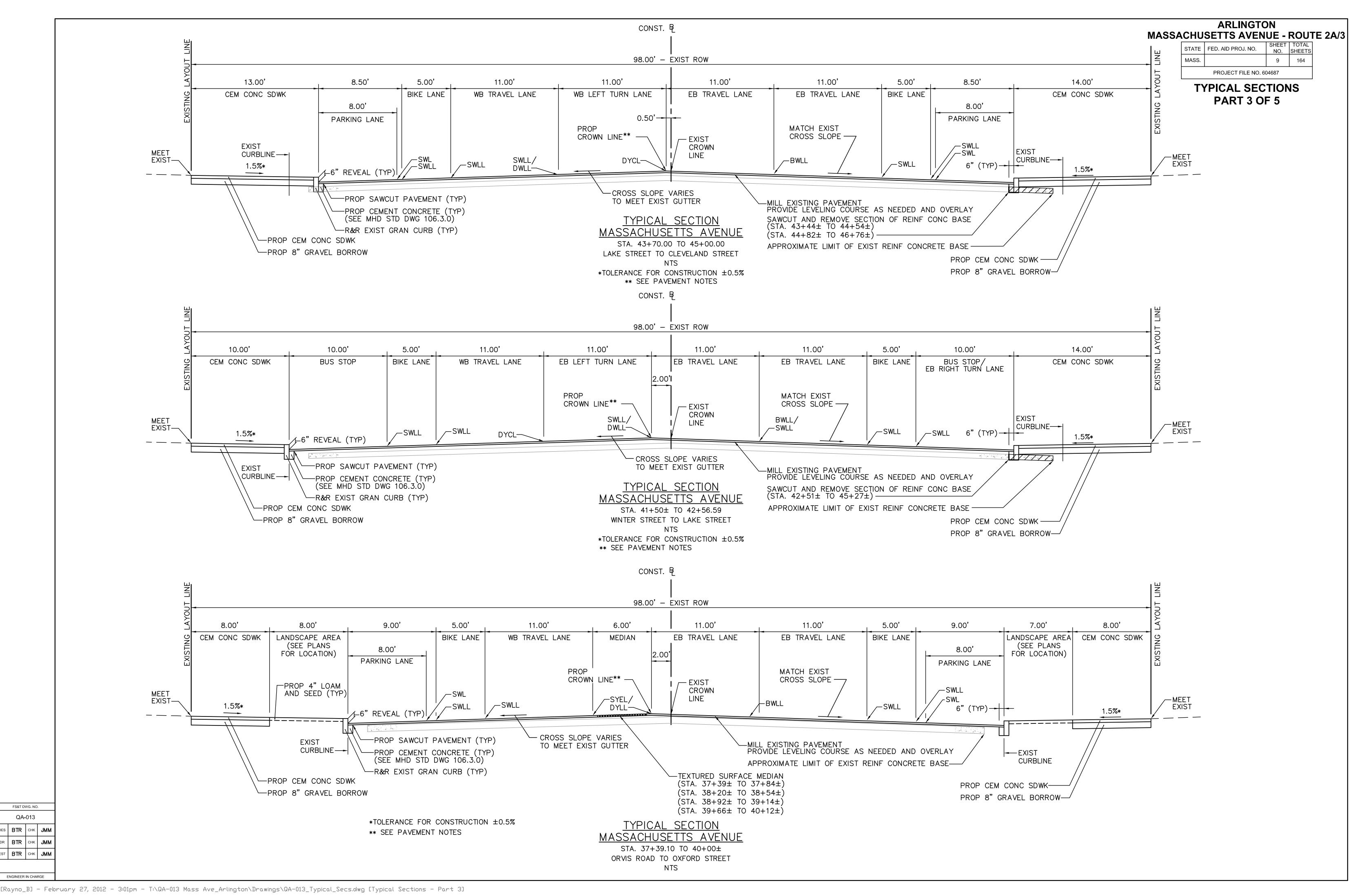


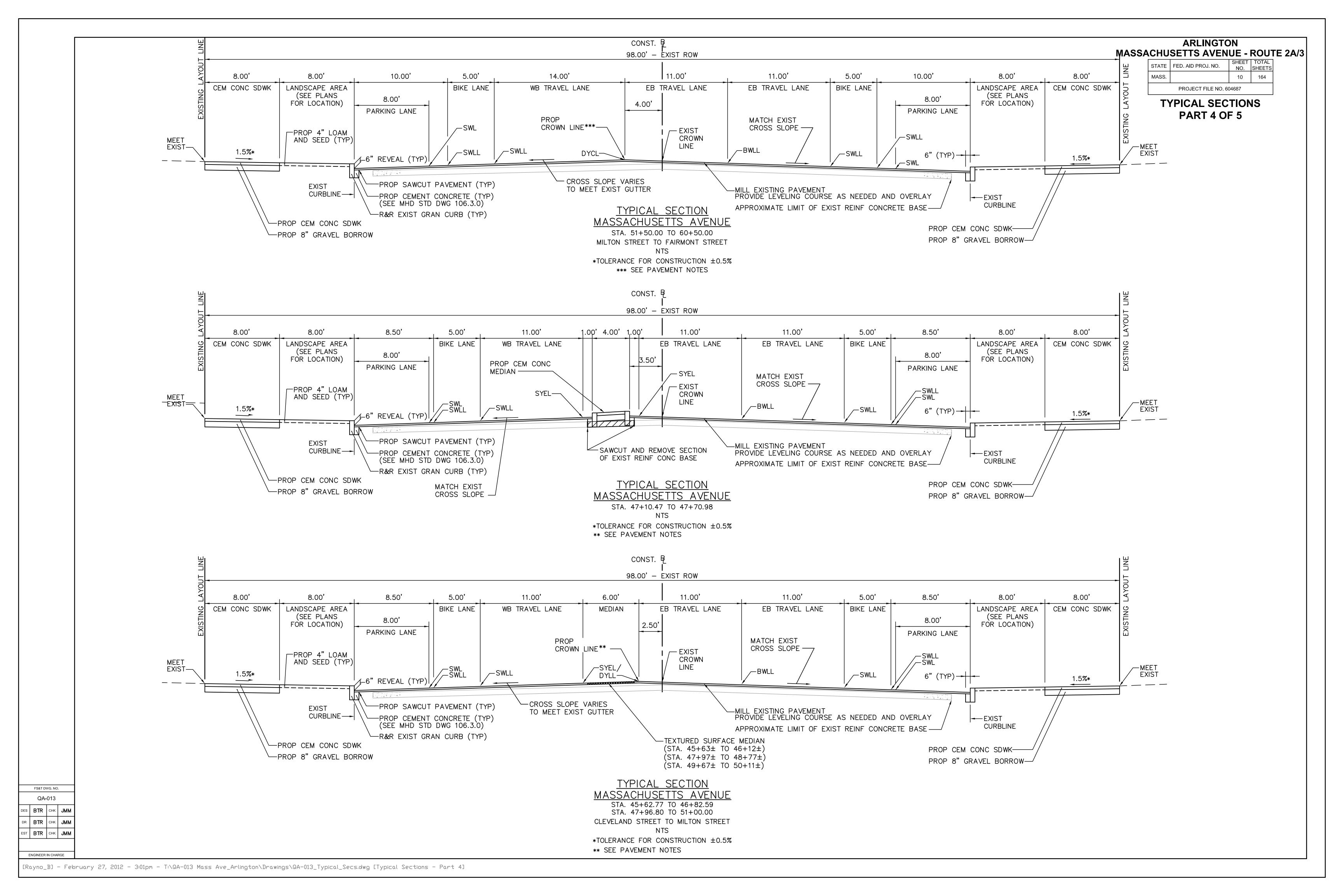


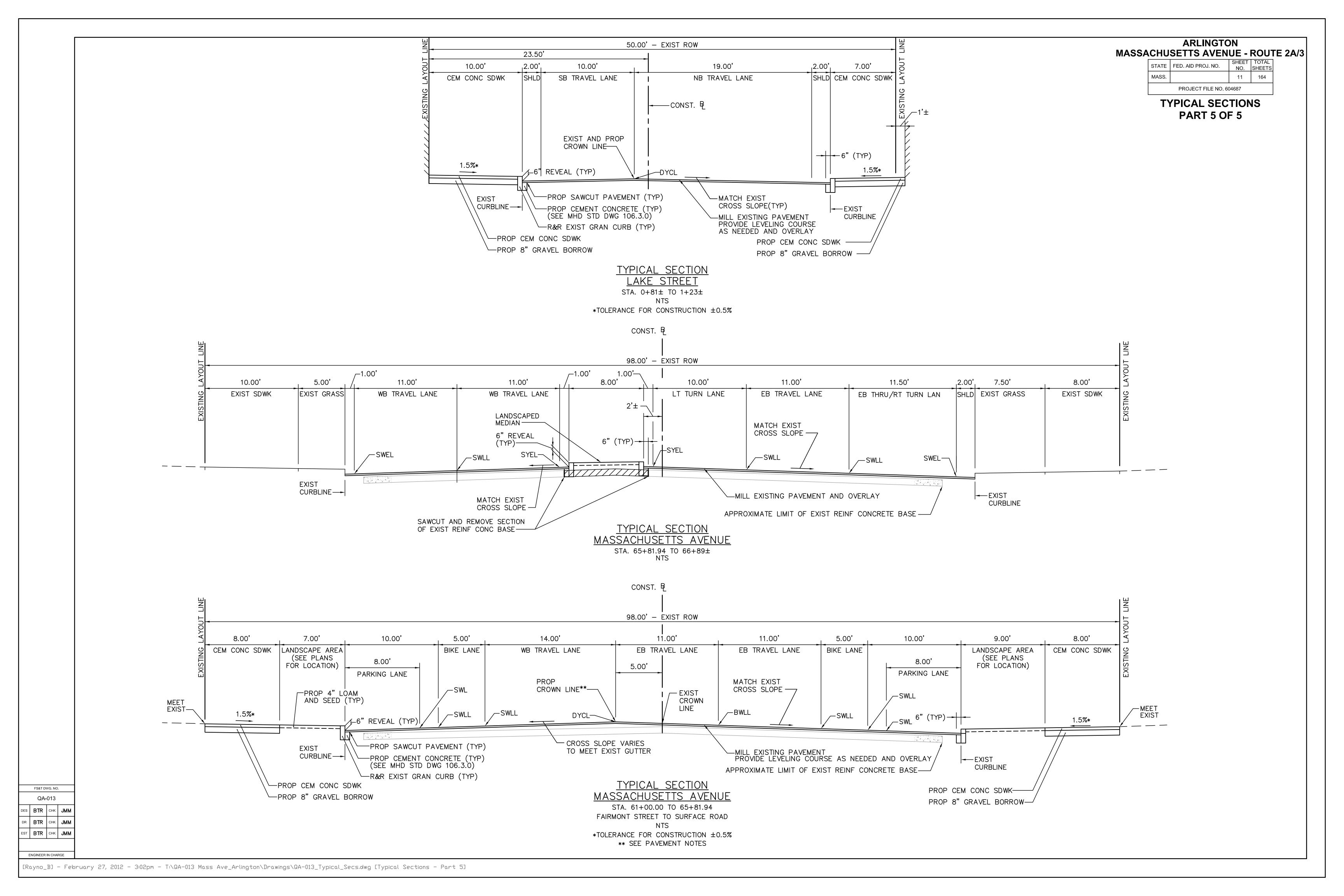


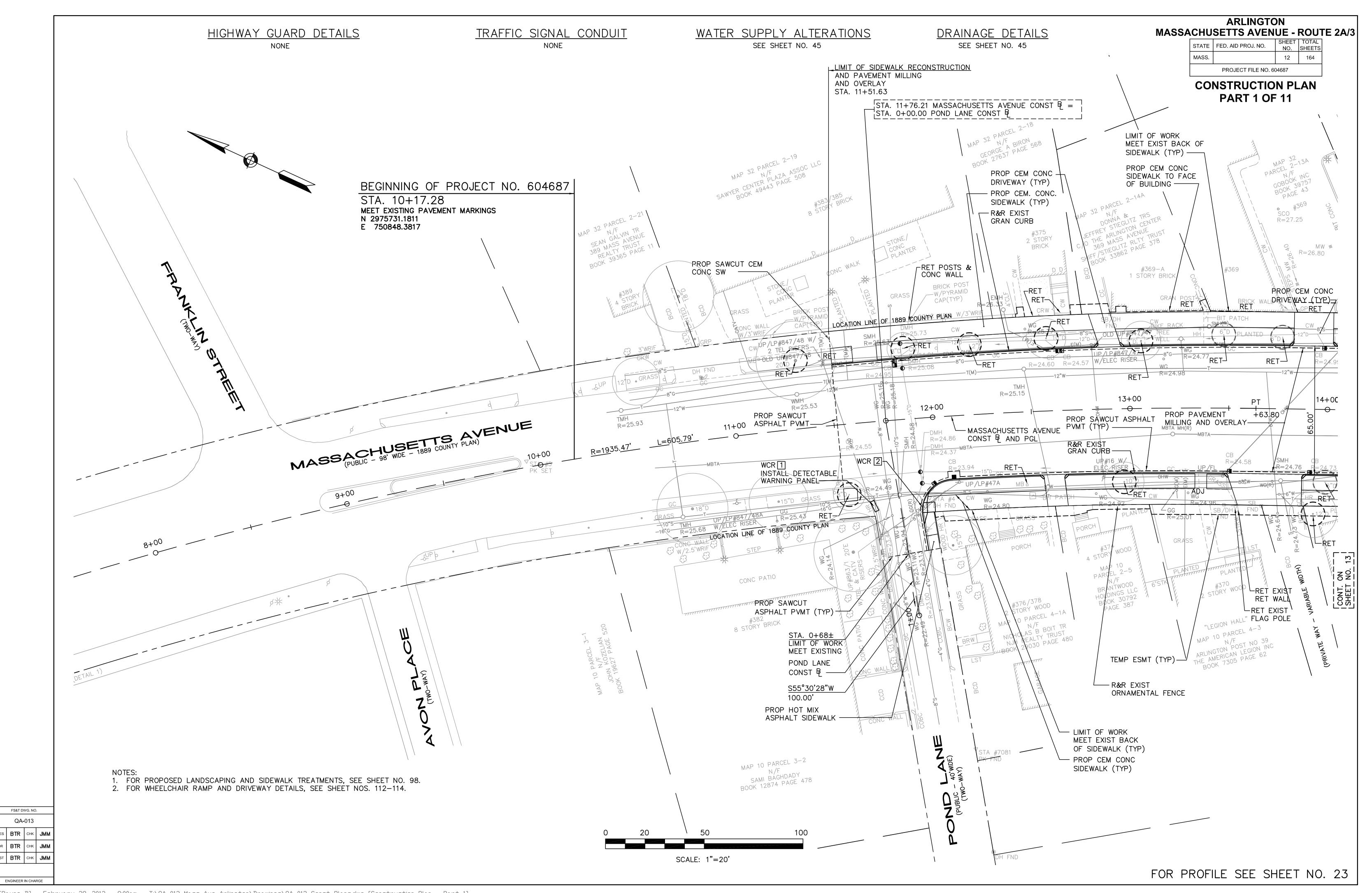


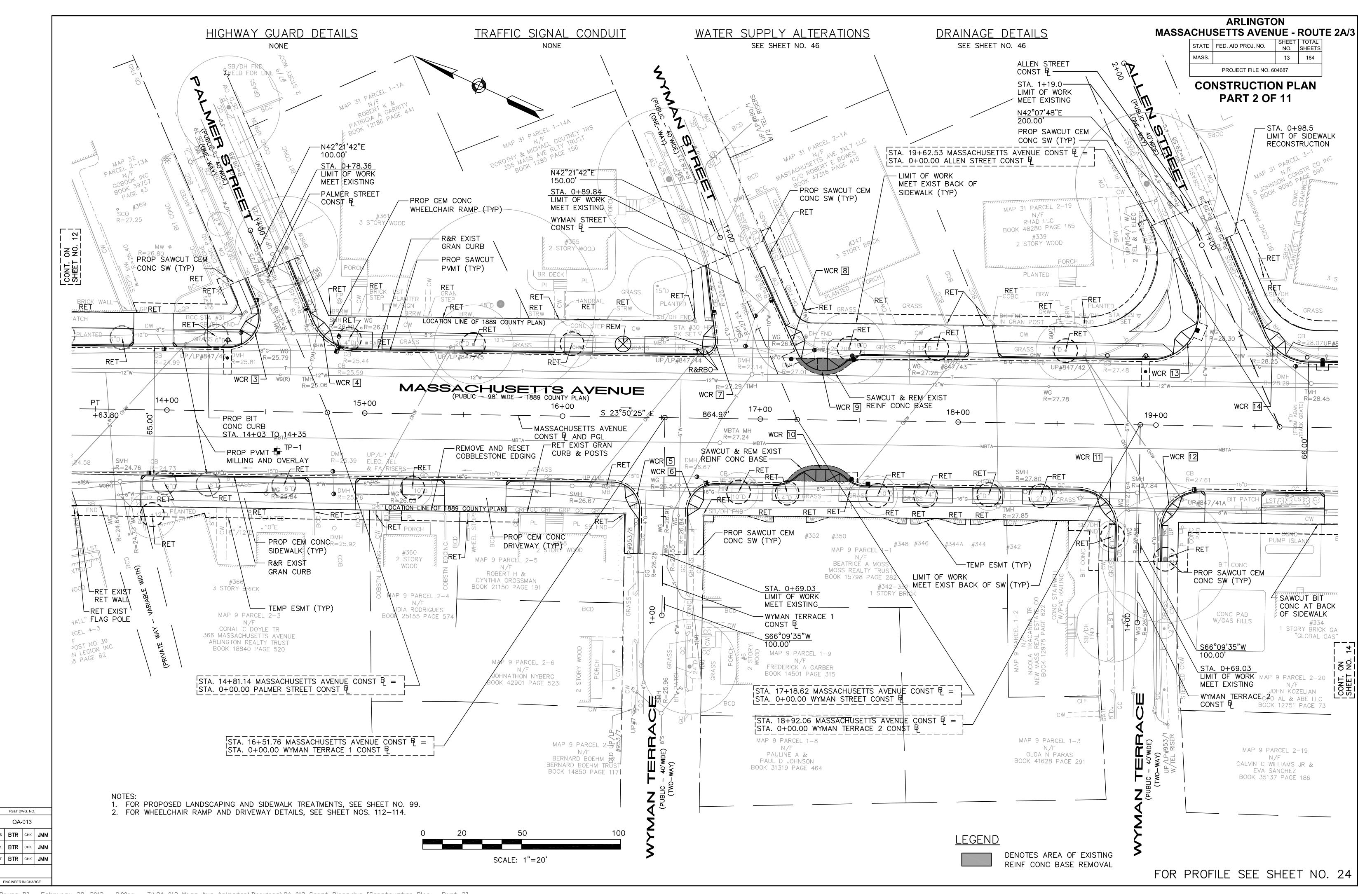


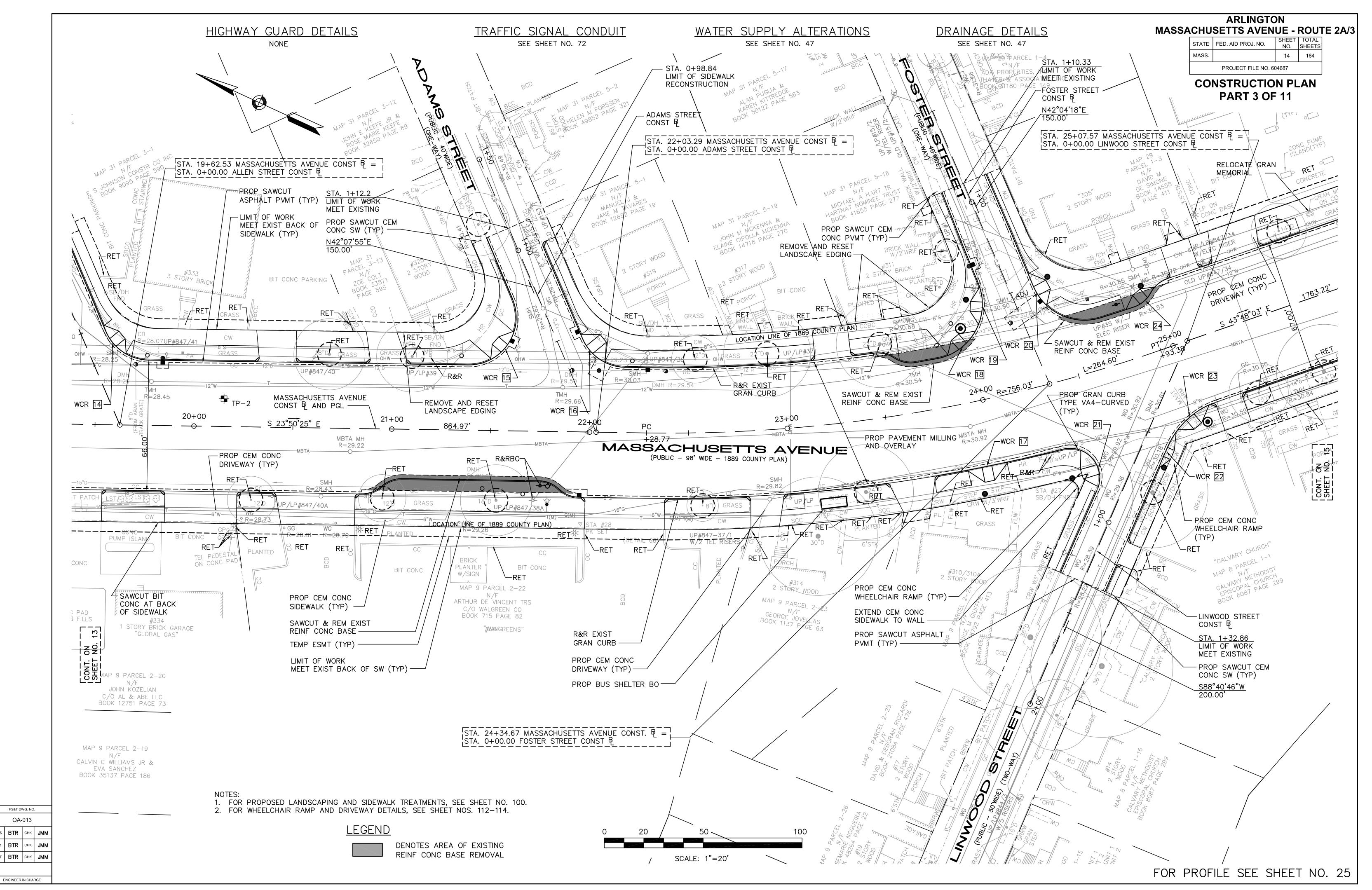


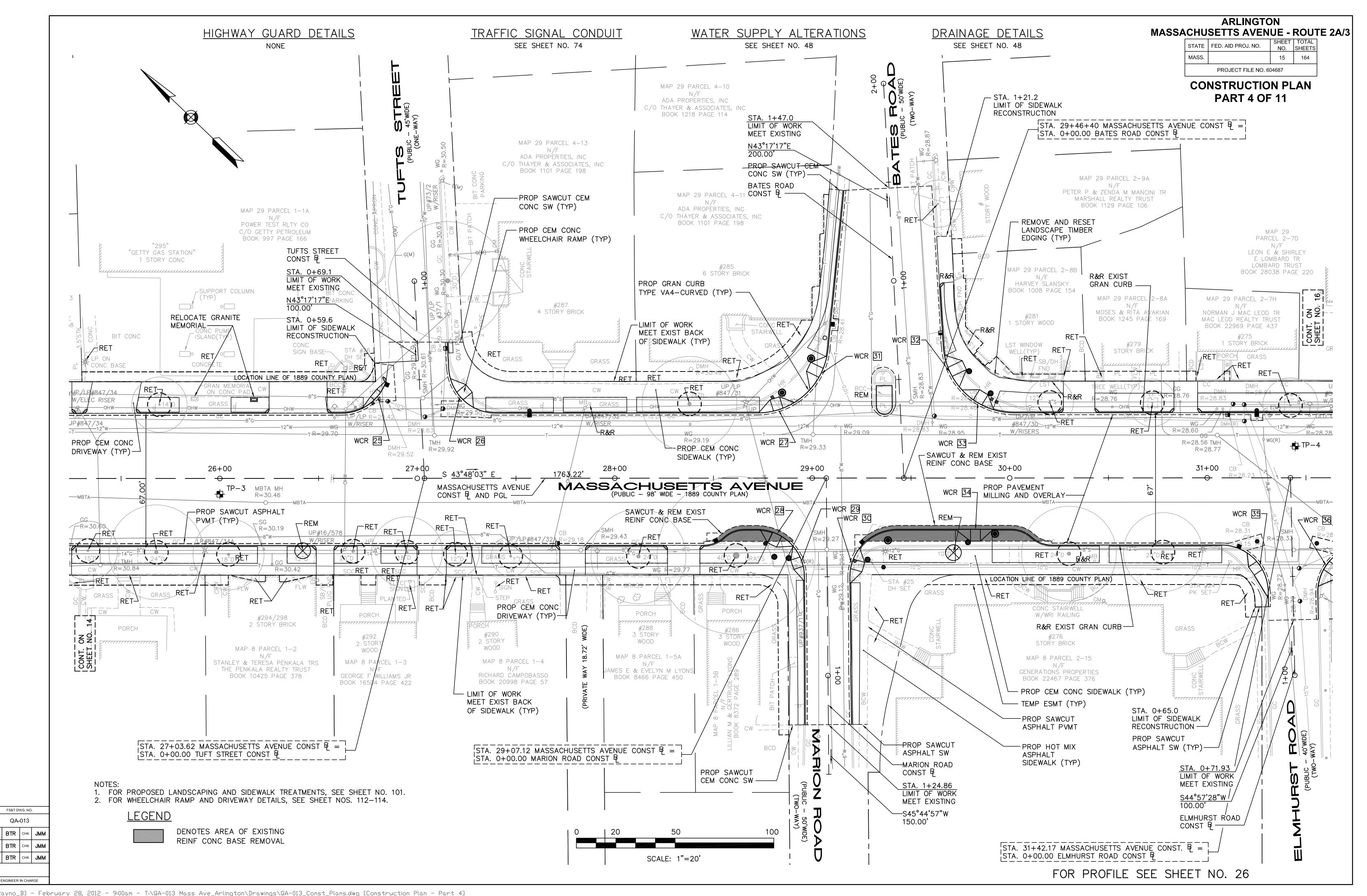


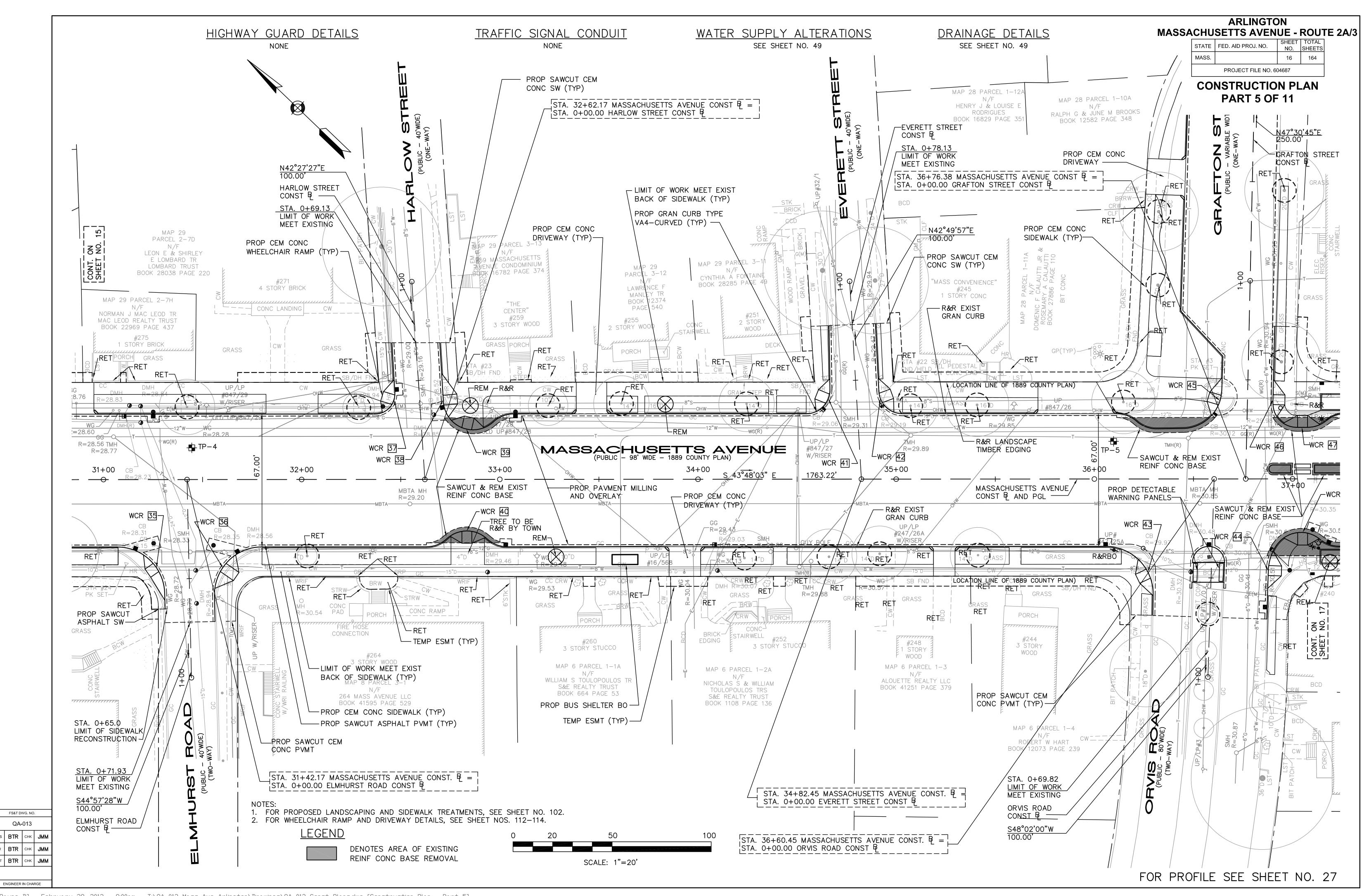


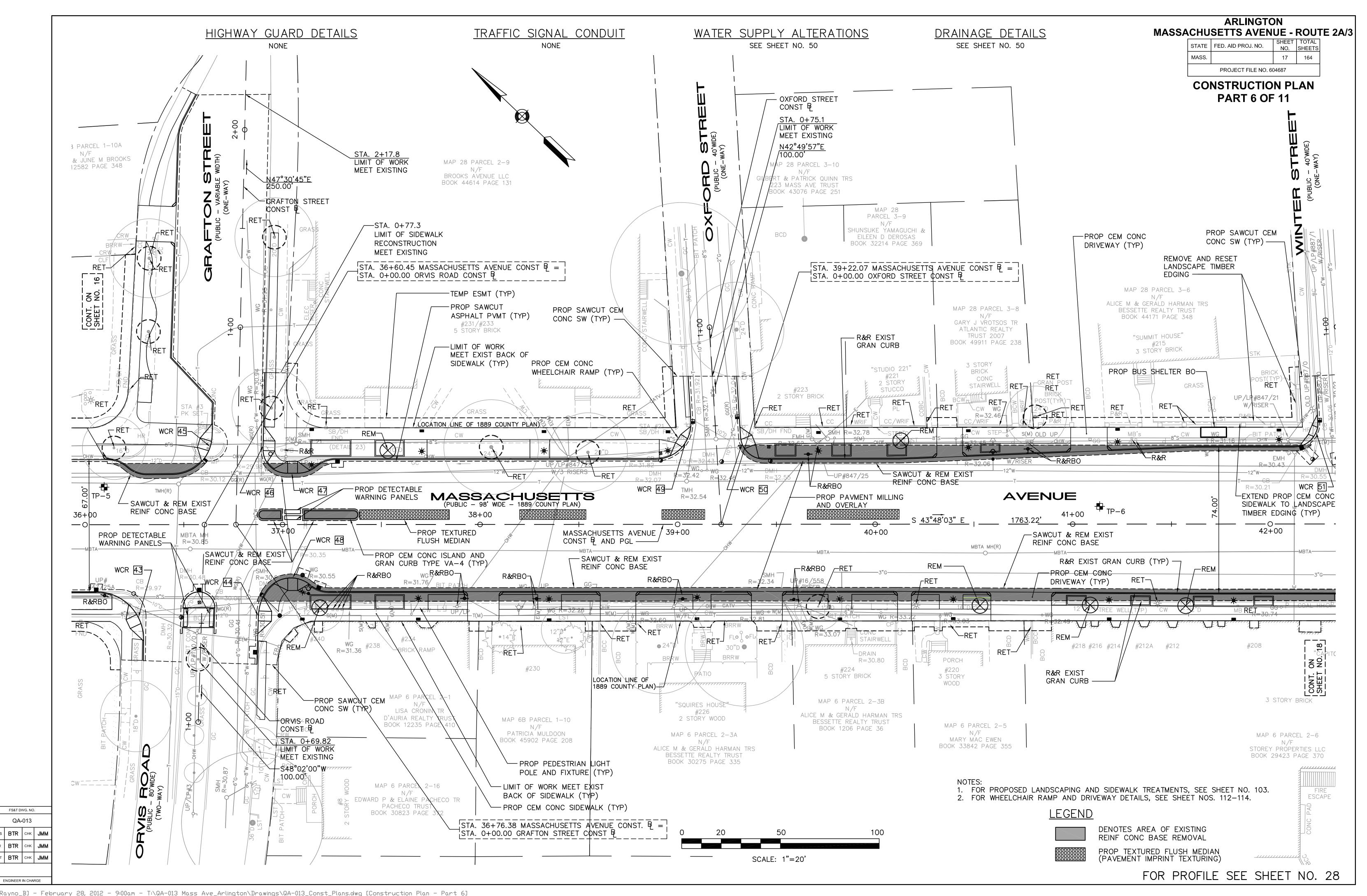


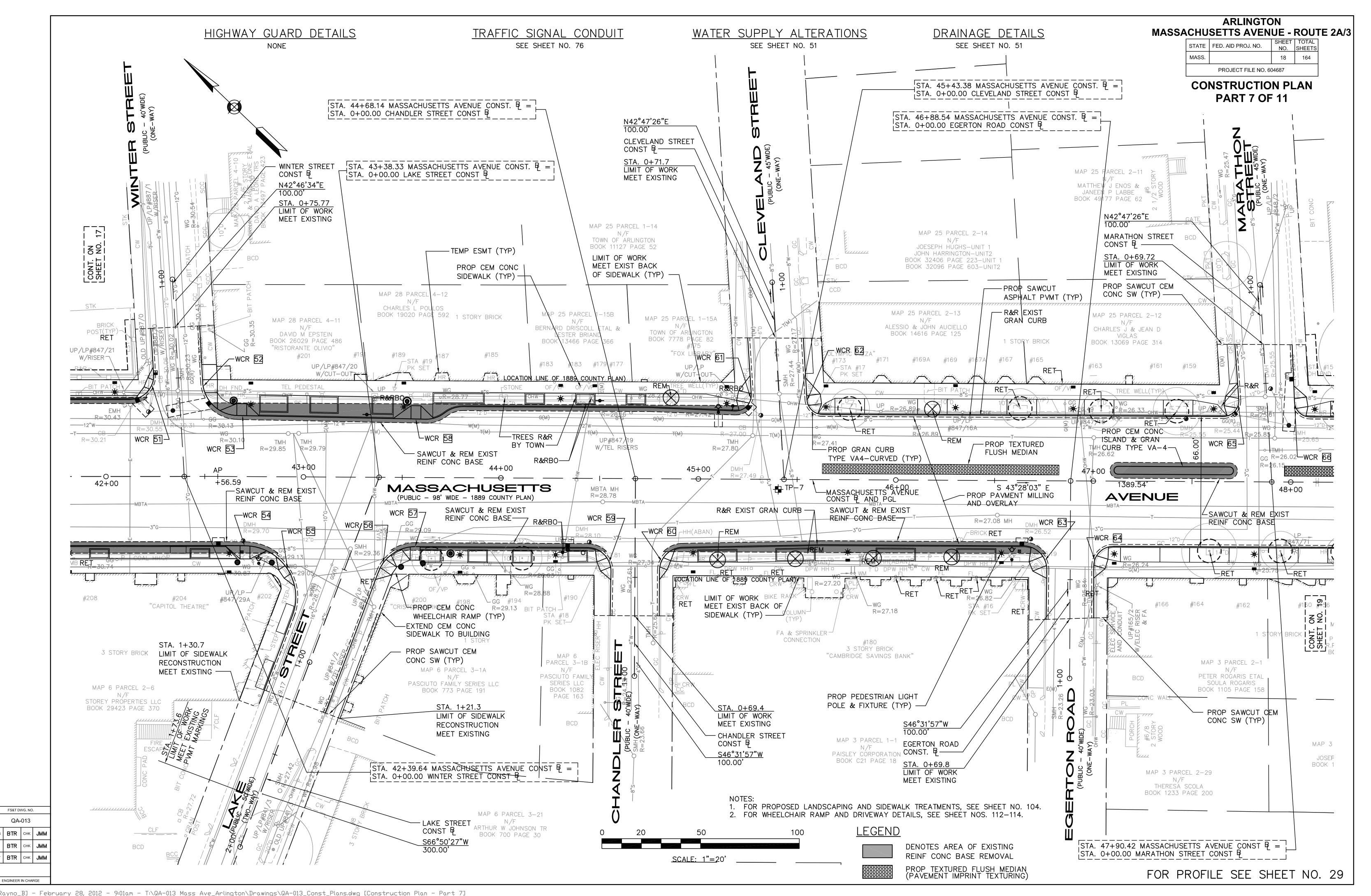


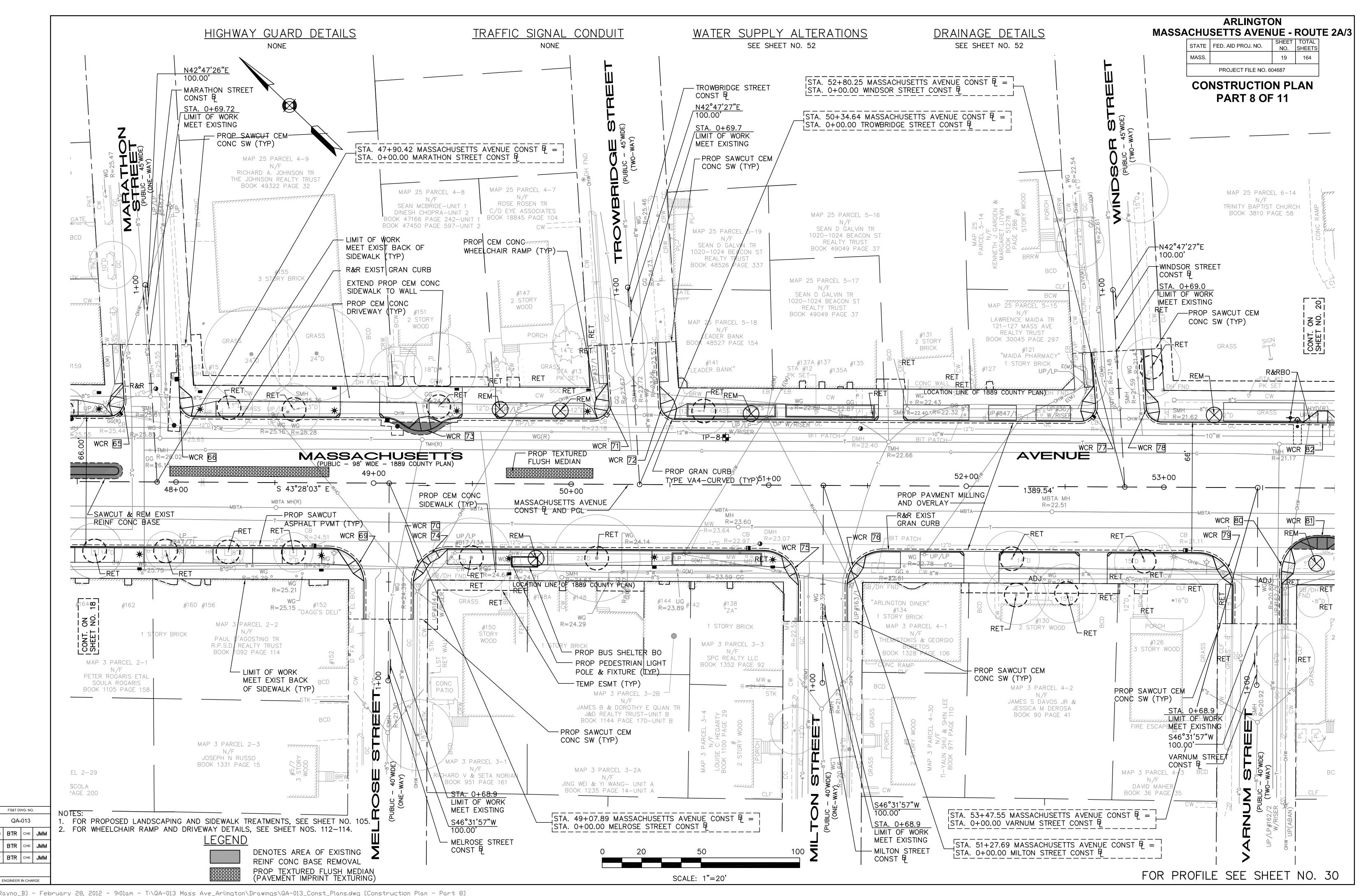


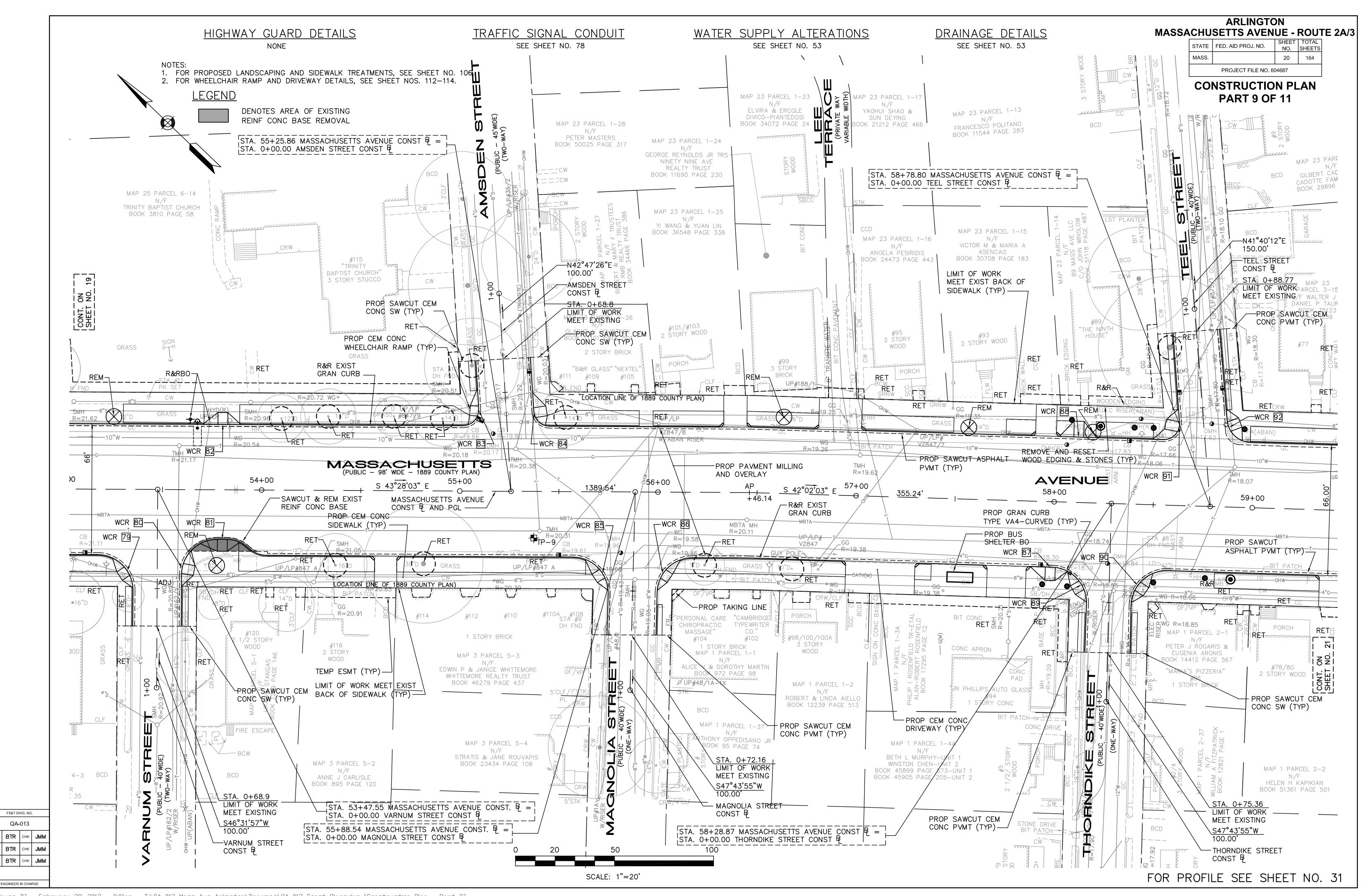


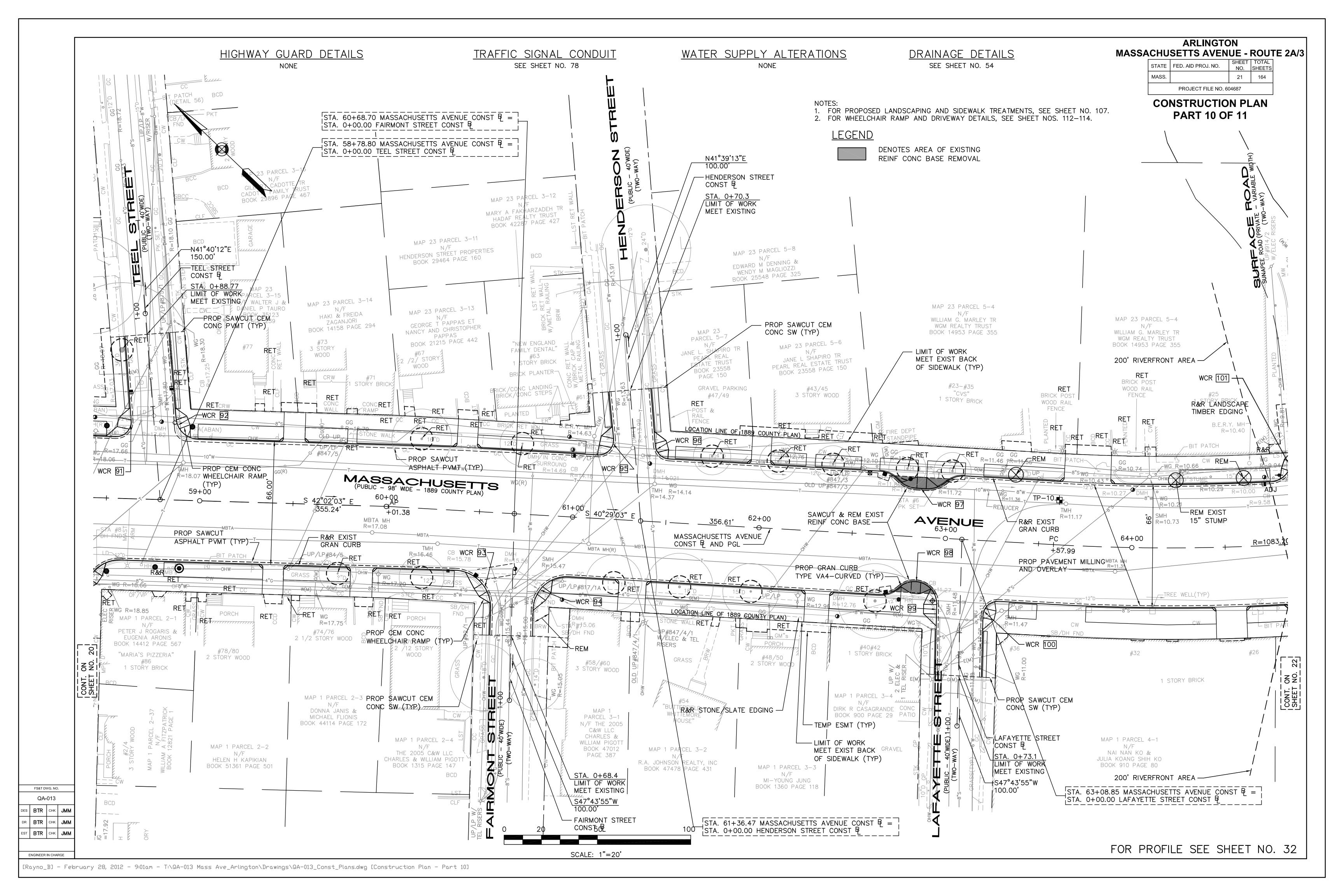


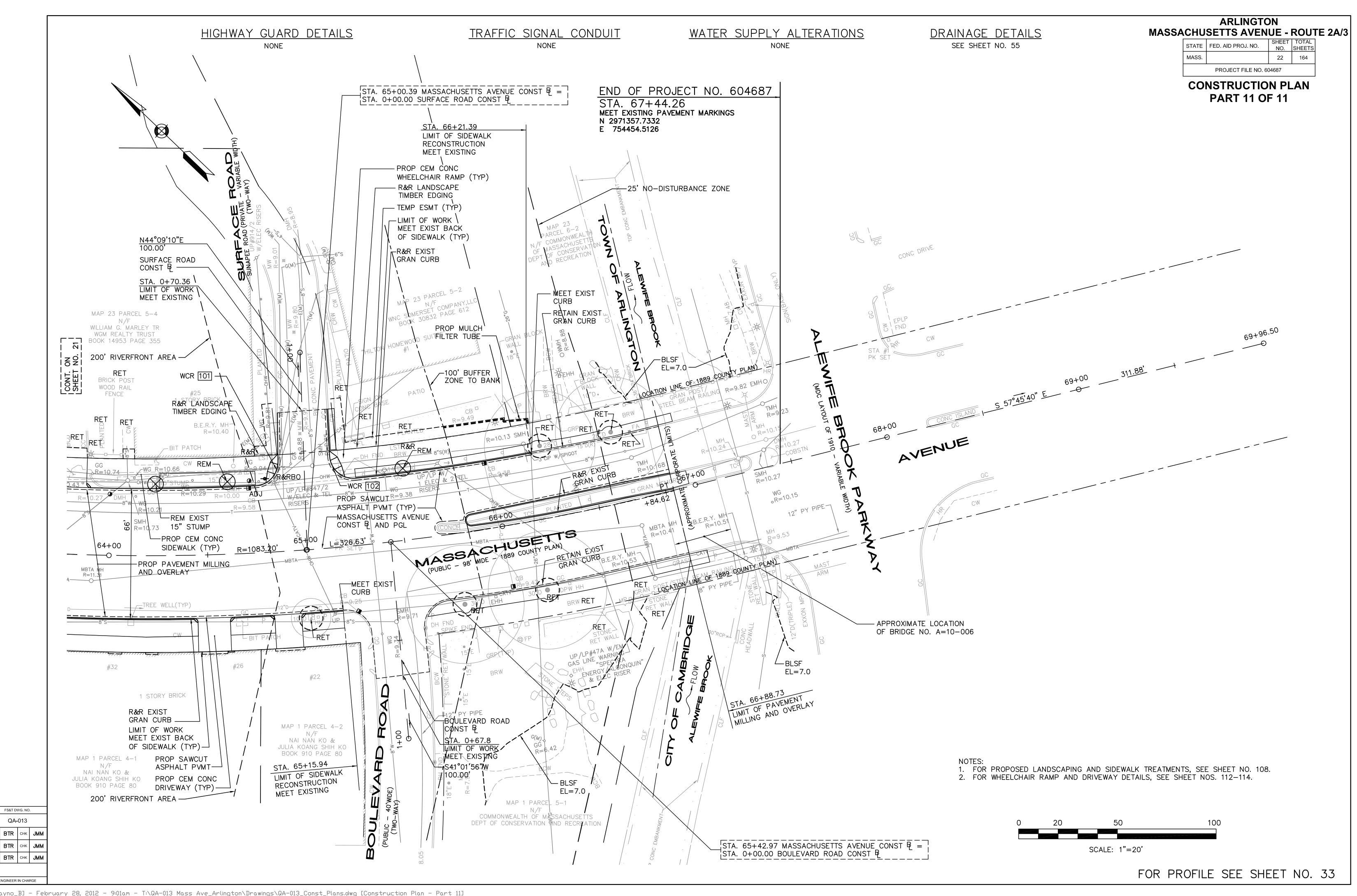


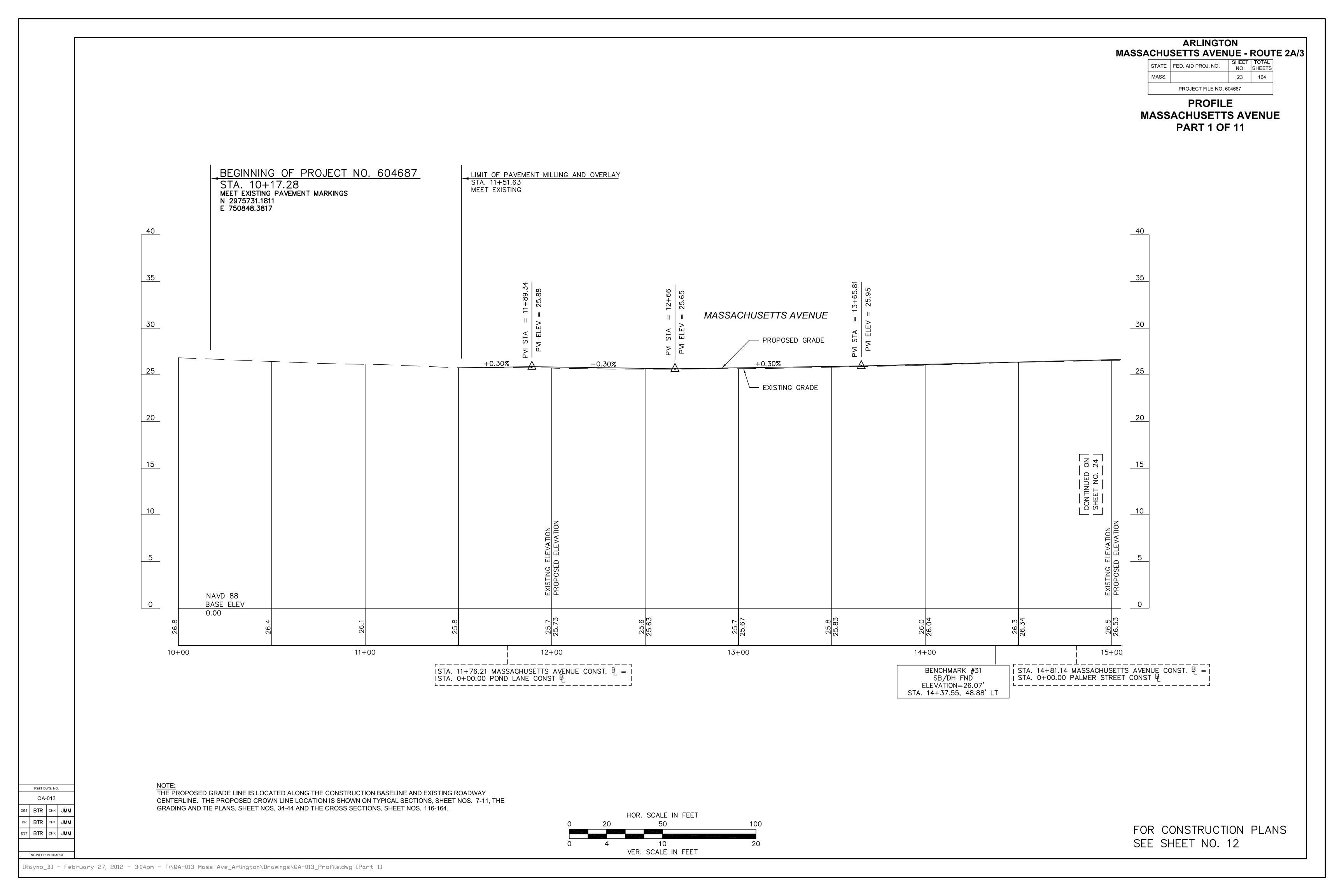


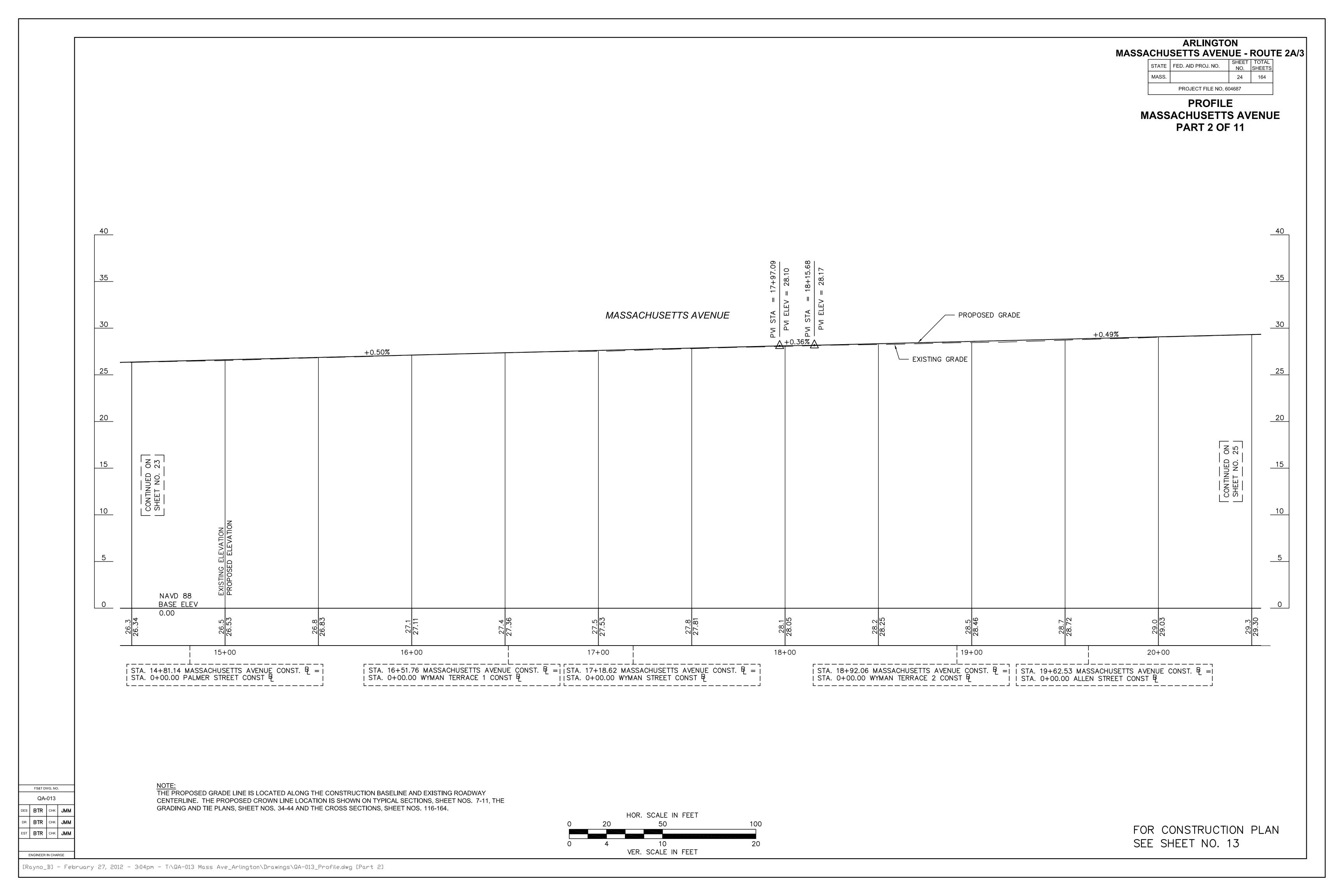


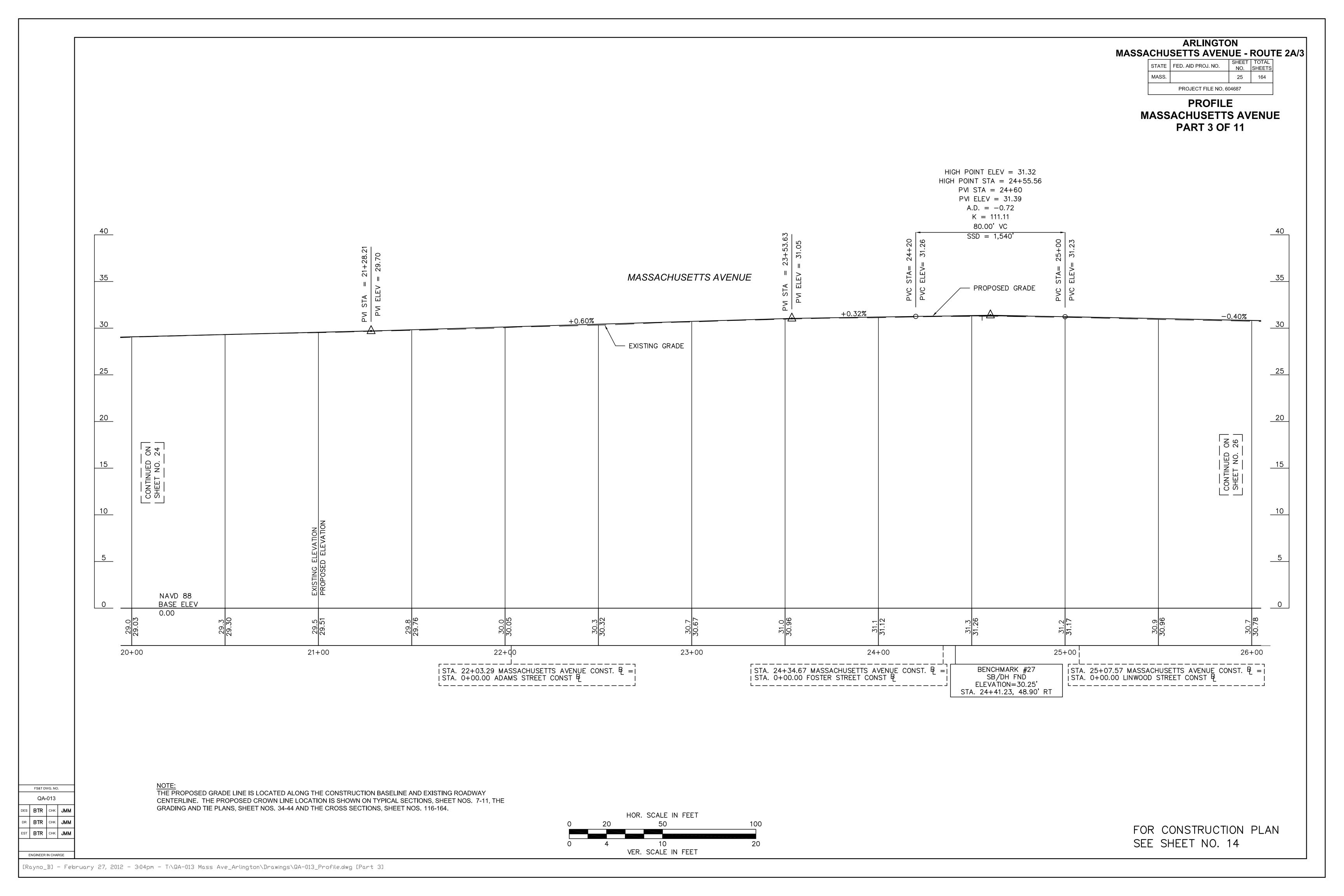


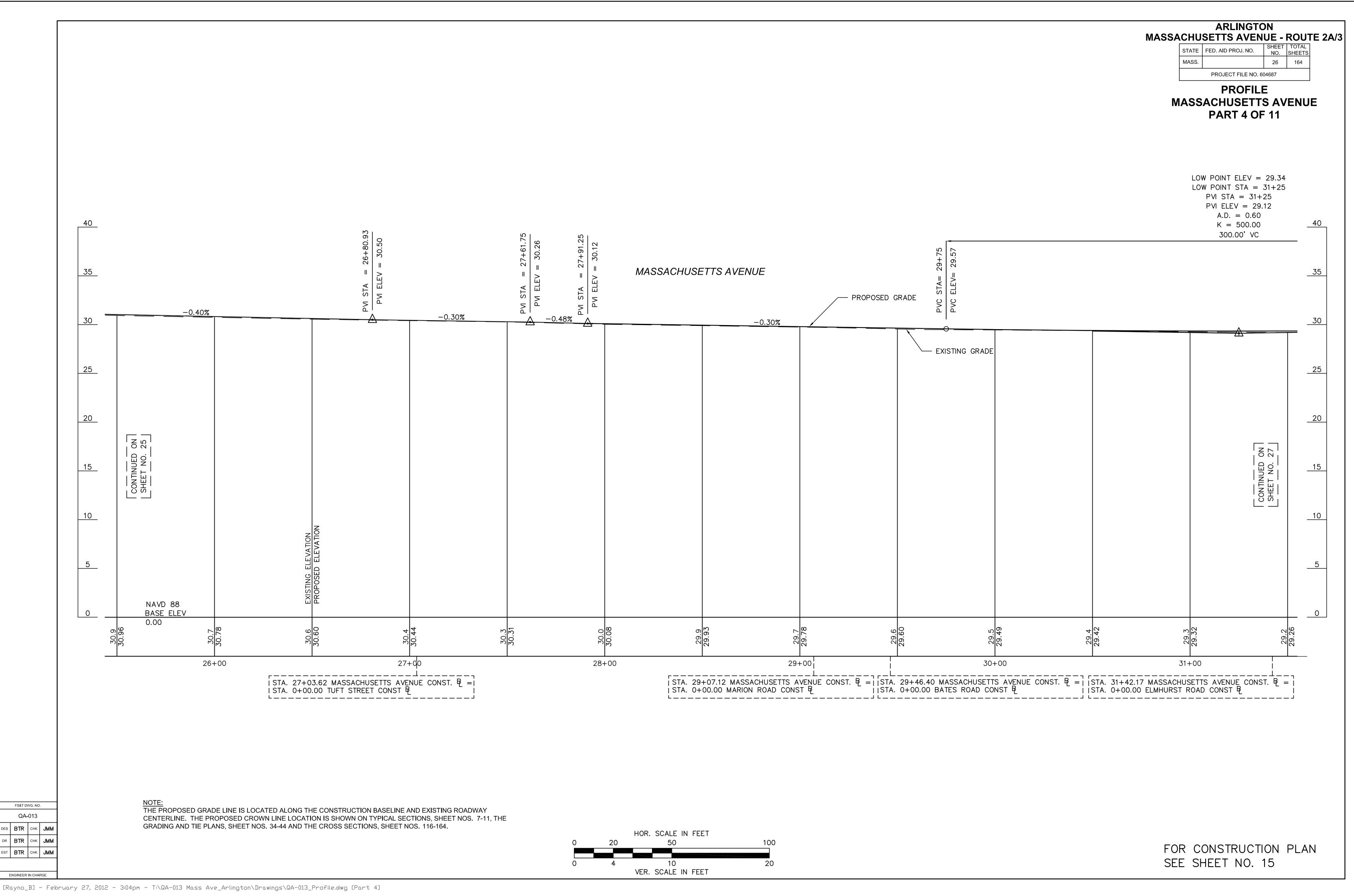


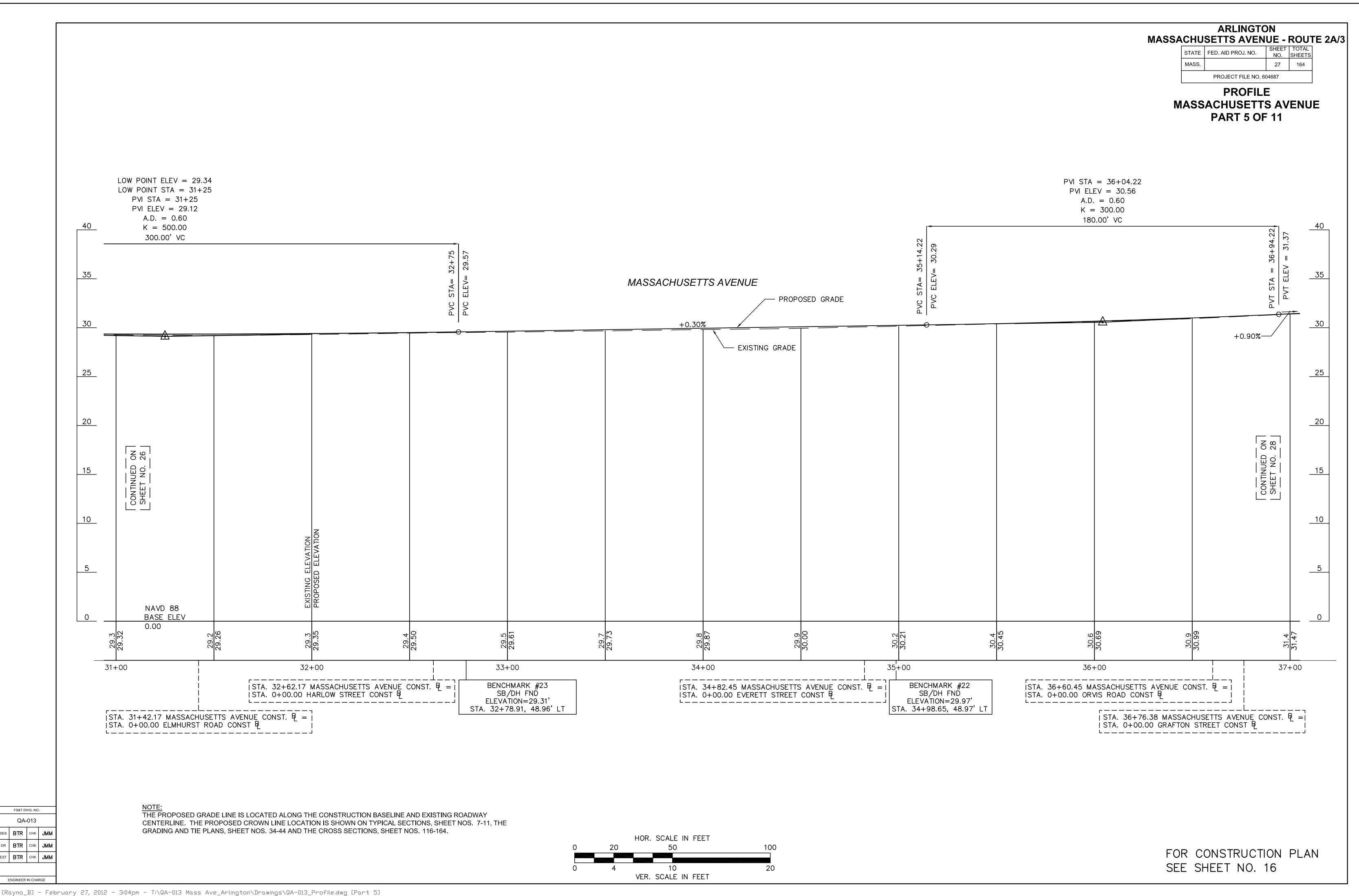


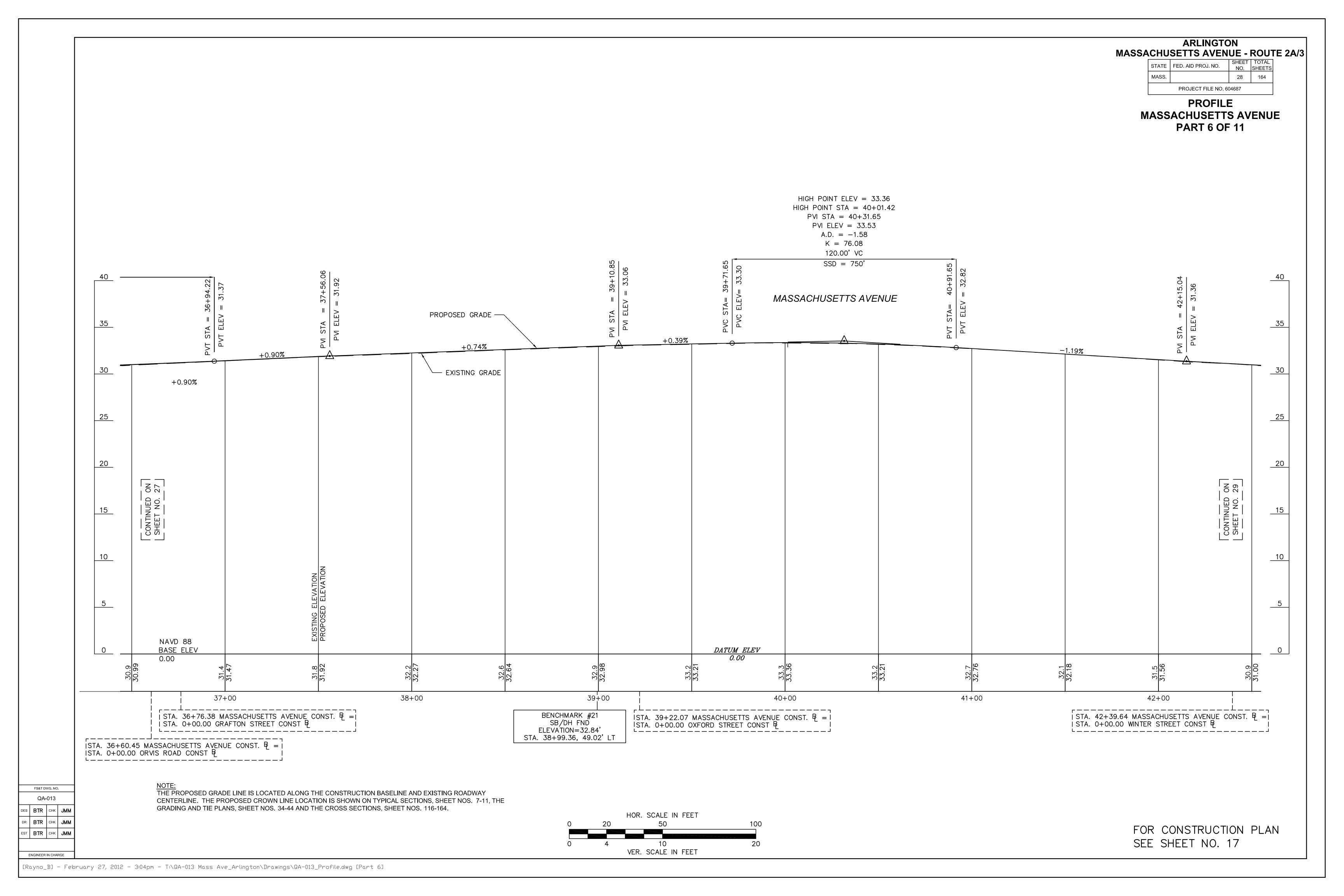


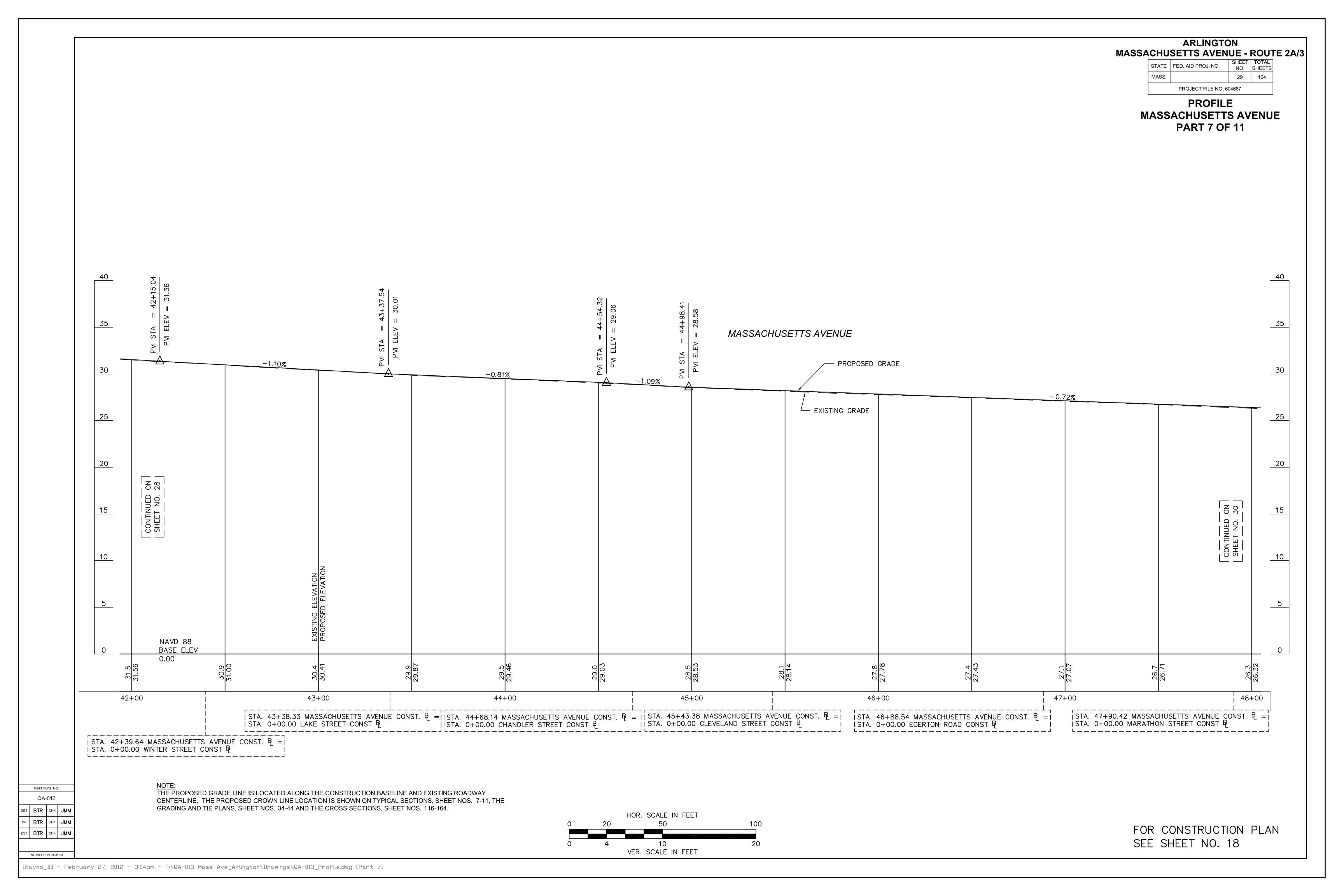


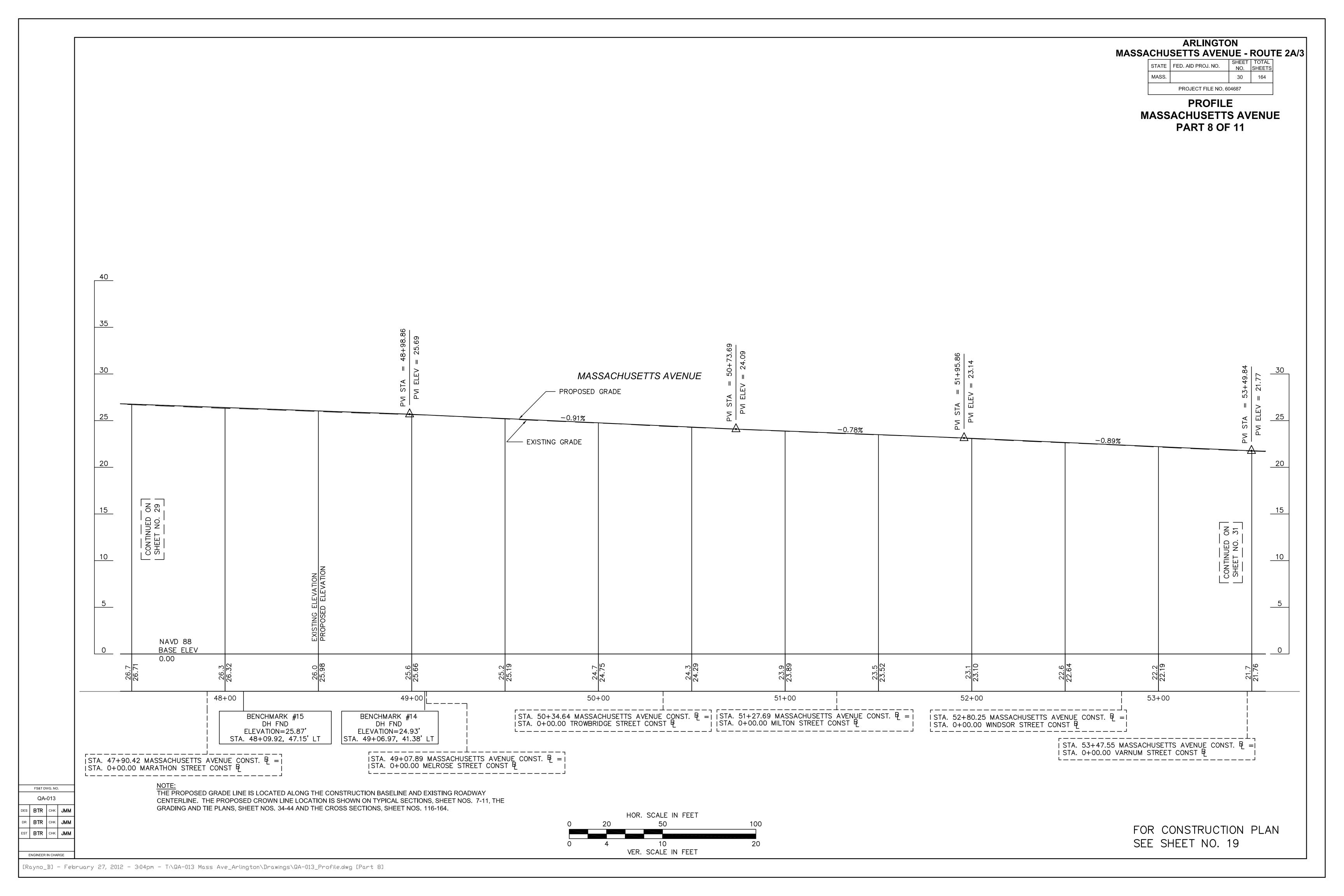


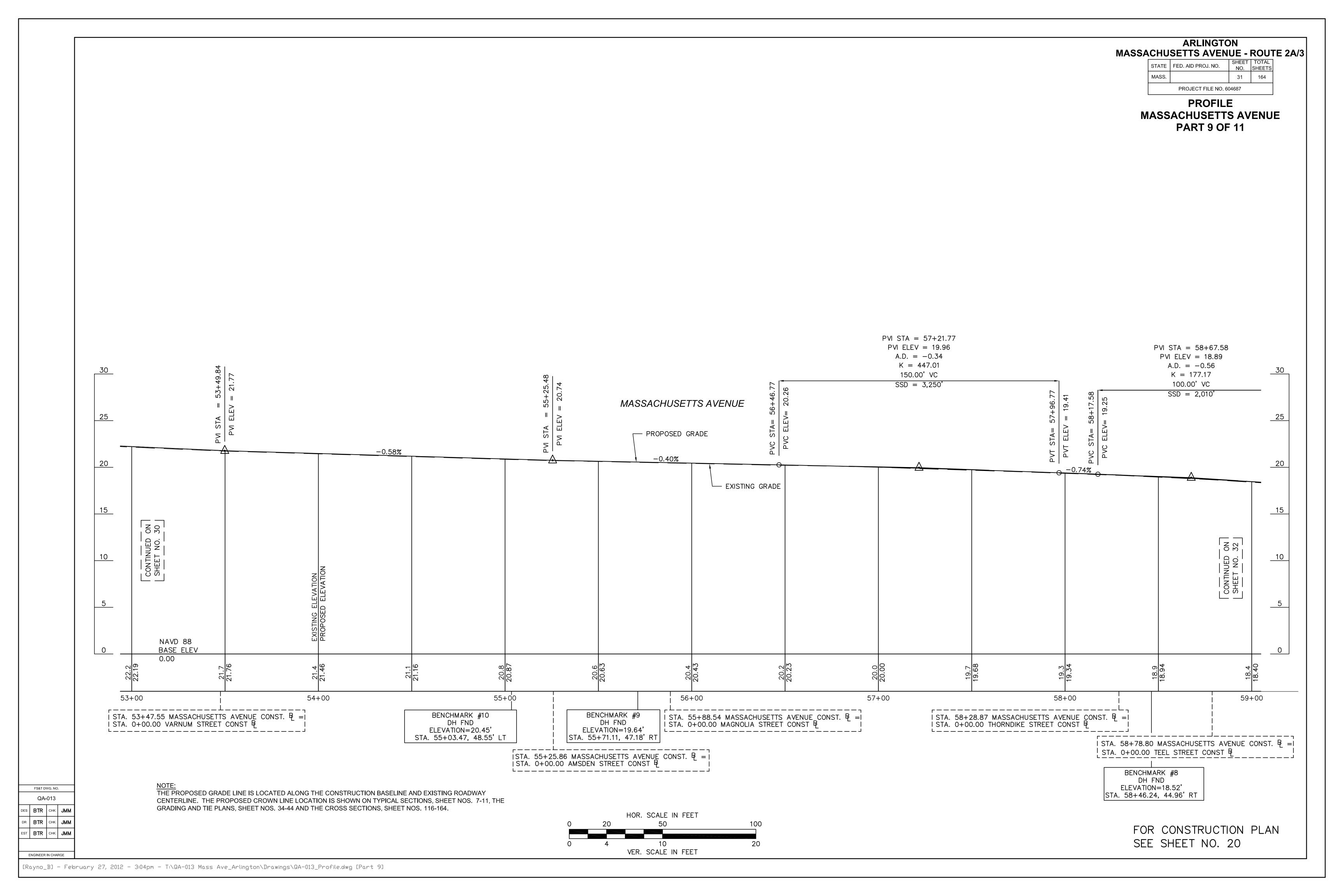


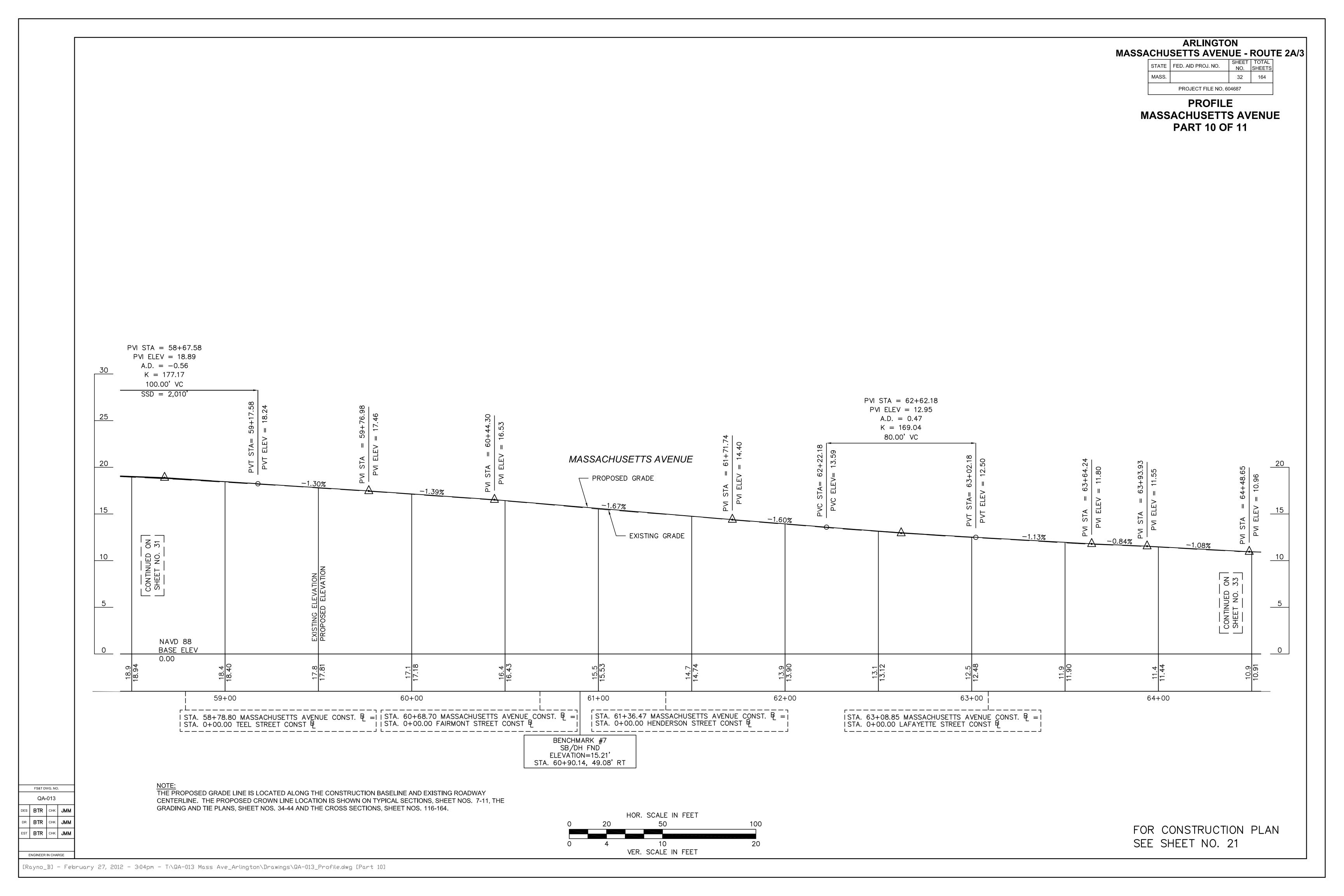








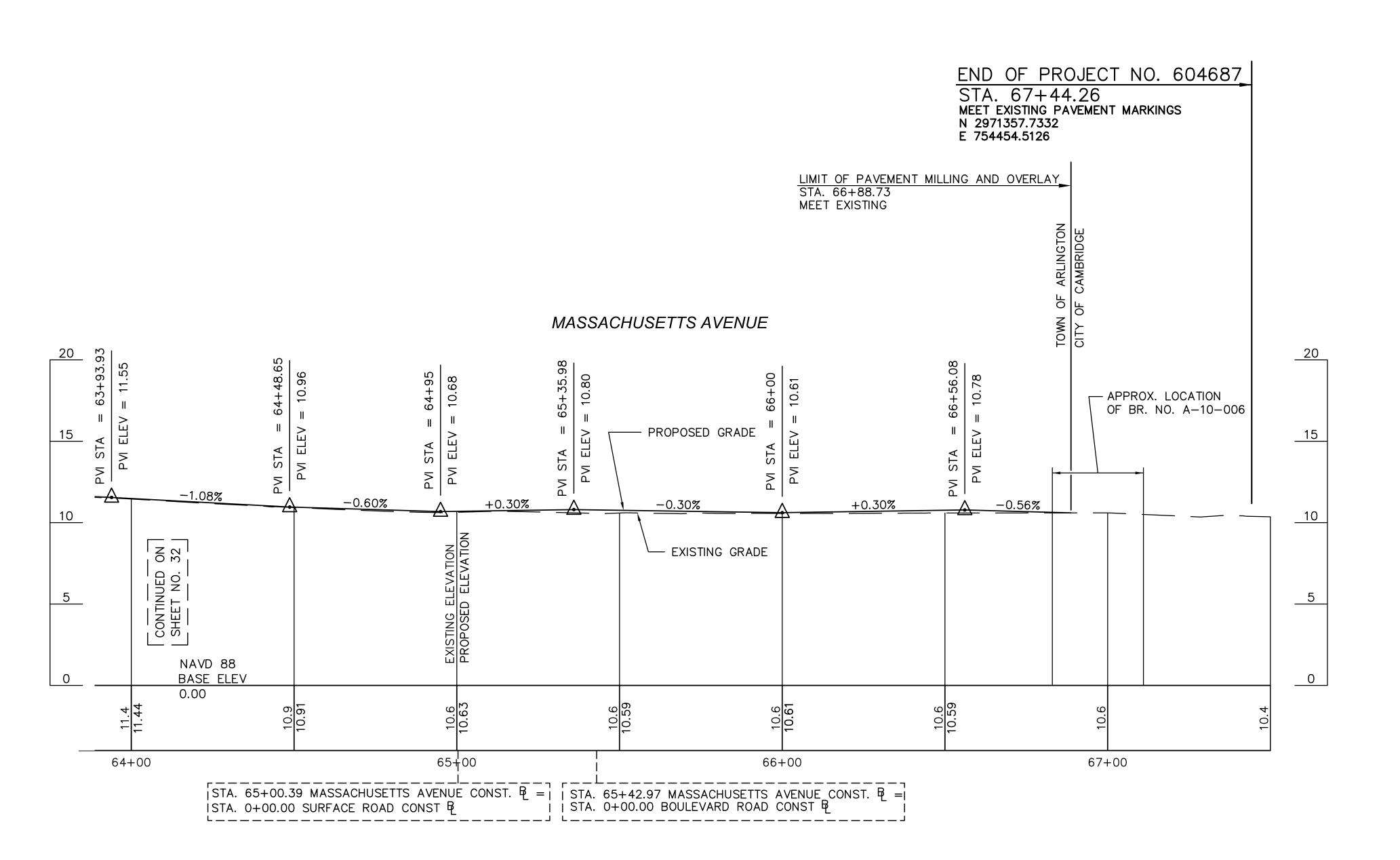




ARLINGTON **MASSACHUSETTS AVENUE - ROUTE 2A/3**

> STATE FED. AID PROJ. NO. SHEET TOTAL NO. SHEETS PROJECT FILE NO. 604687

PROFILE MASSACHUSETTS AVENUE PART 11 OF 11



NOTE:
THE PROPOSED GRADE LINE IS LOCATED ALONG THE CONSTRUCTION BASELINE AND EXISTING ROADWAY

FS&T DWG. NO.

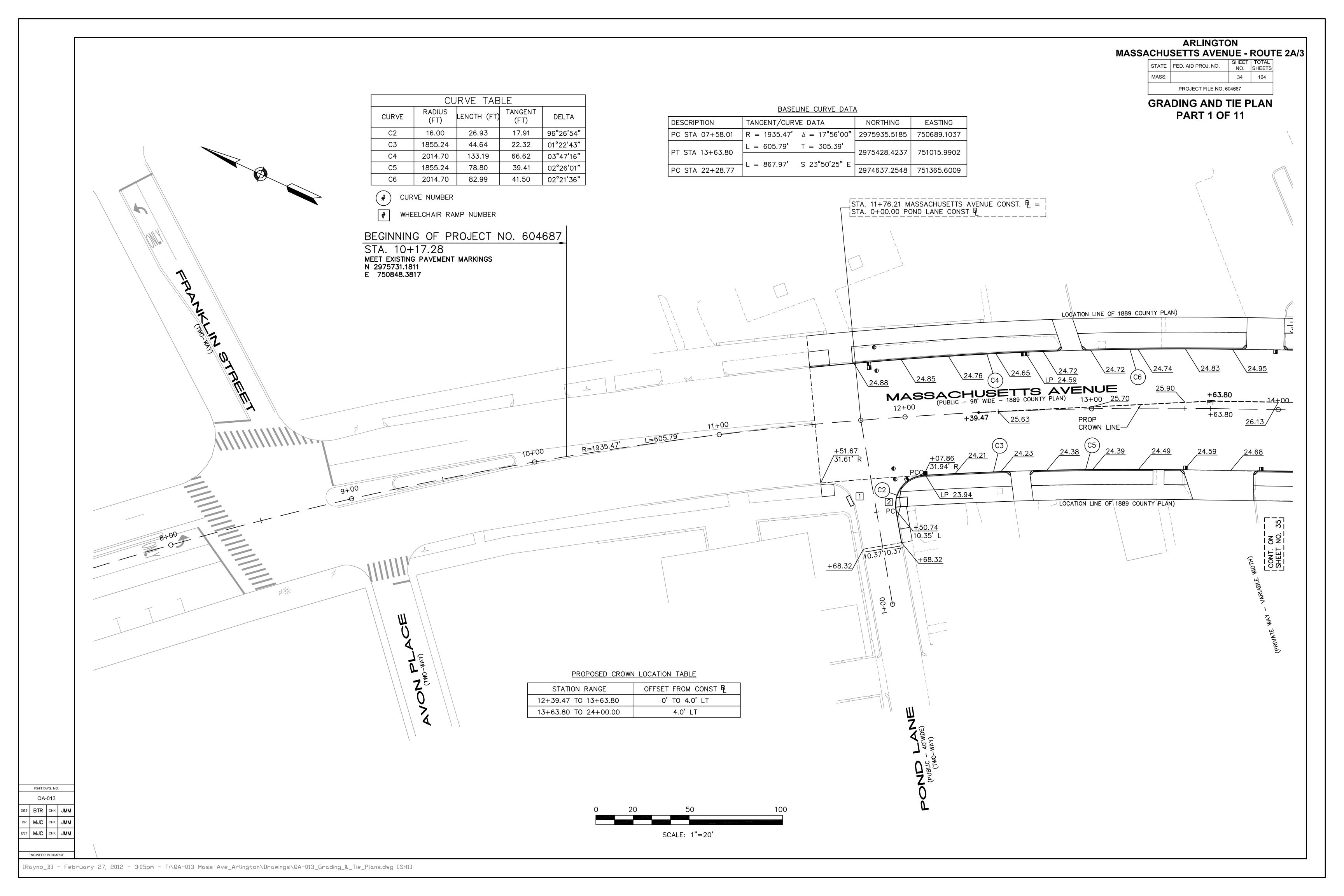
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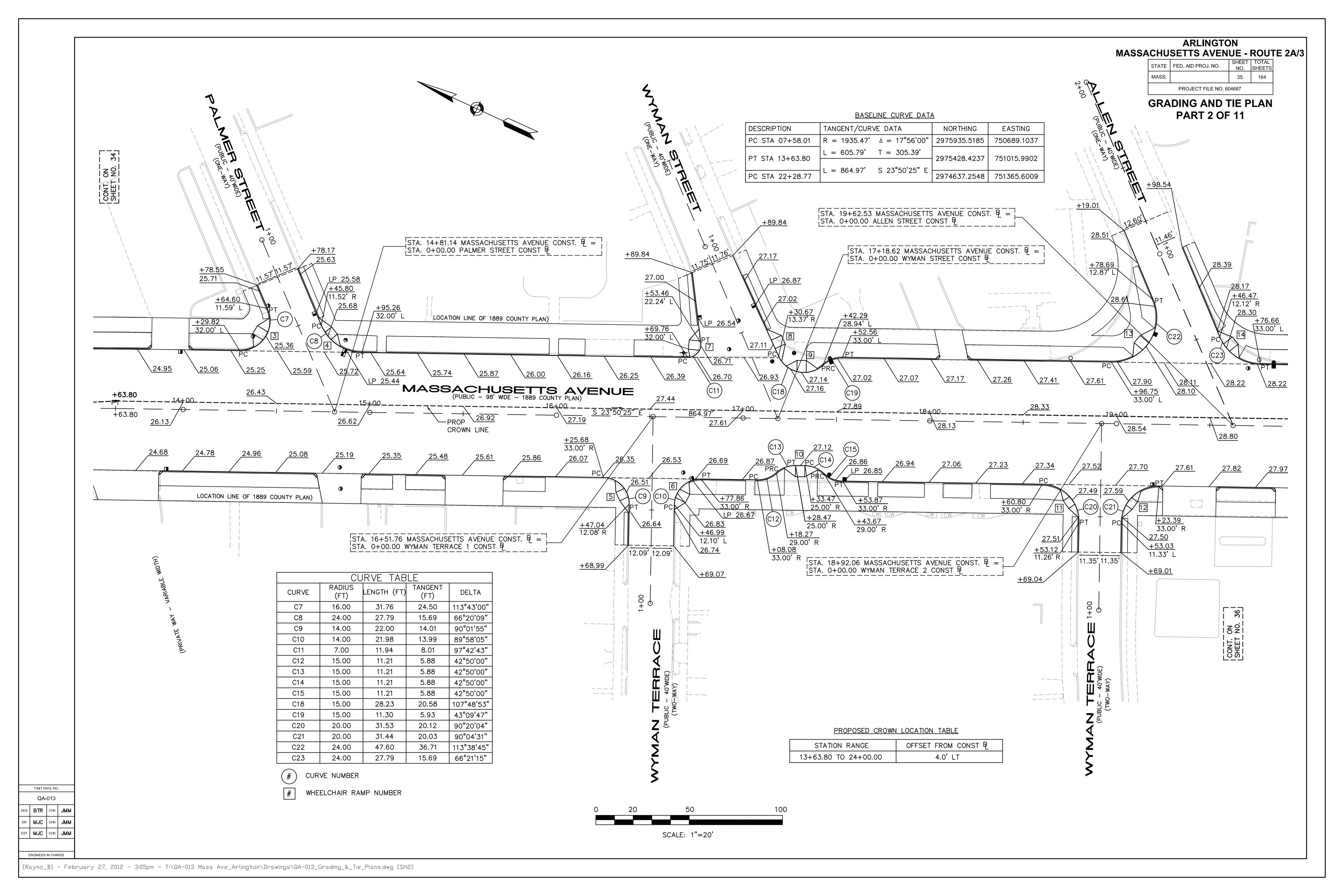
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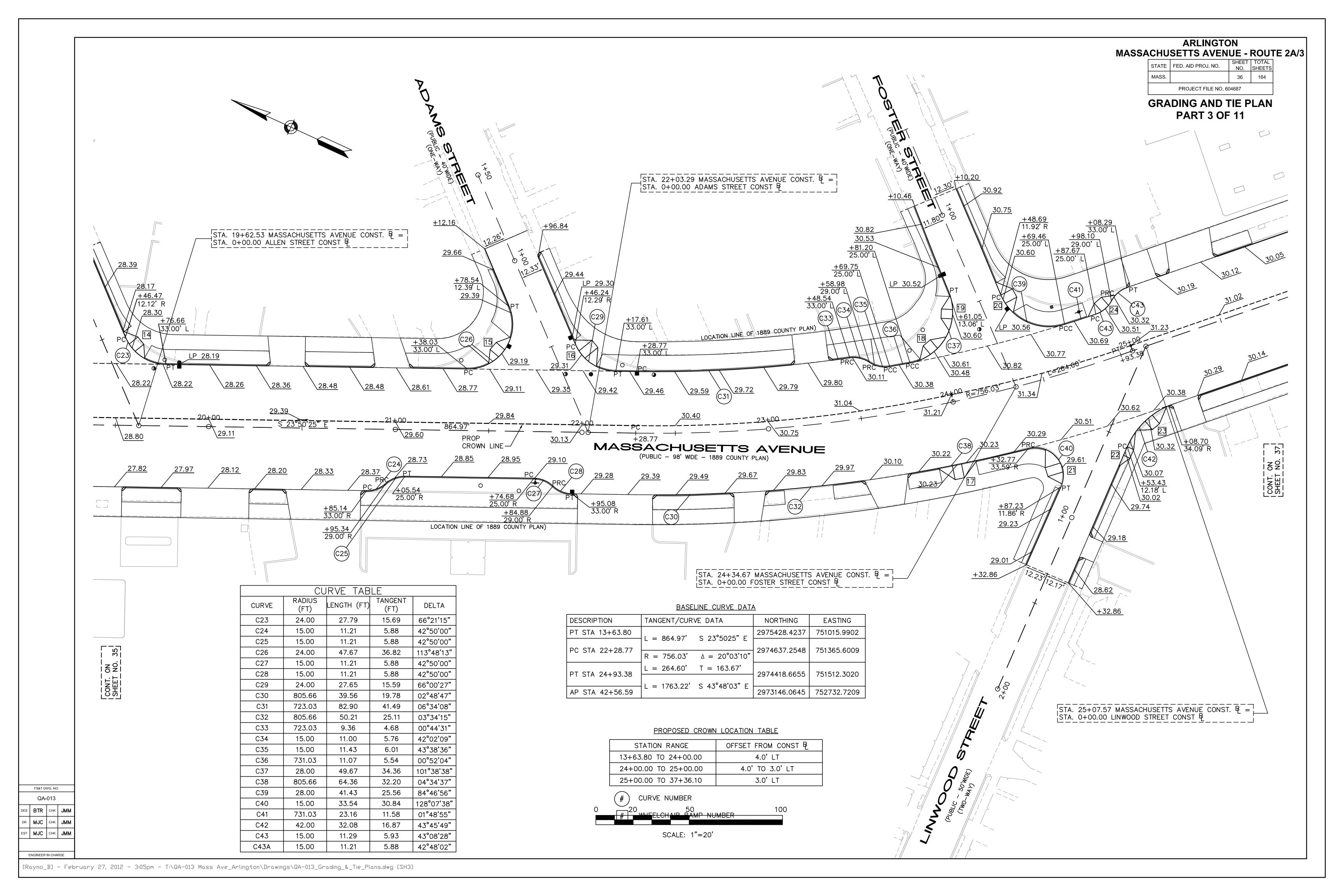
FOR CONSTRUCTION PLAN SEE SHEET NO. 22

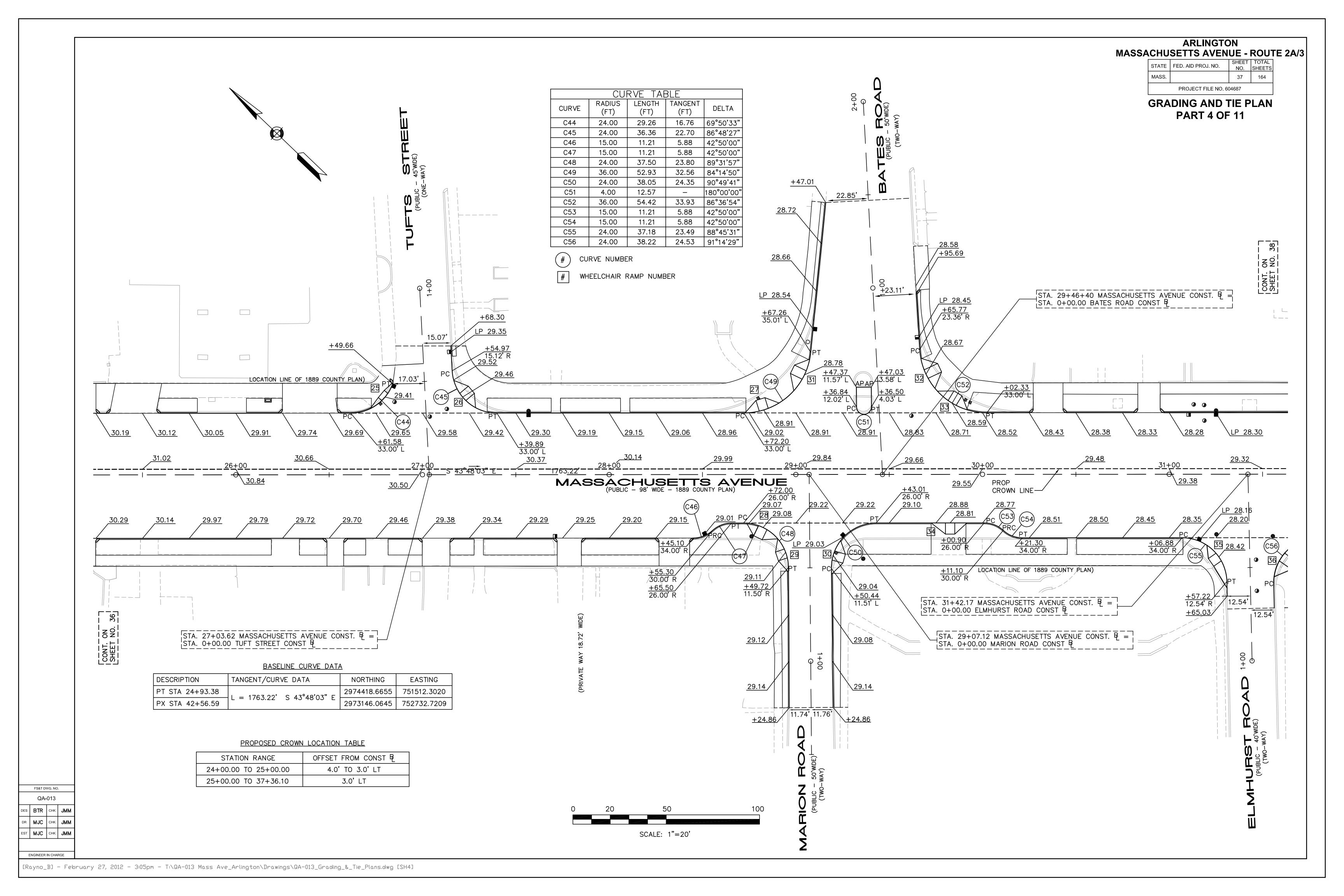
CENTERLINE. THE PROPOSED CROWN LINE LOCATION IS SHOWN ON TYPICAL SECTIONS, SHEET NOS. 7-11, THE

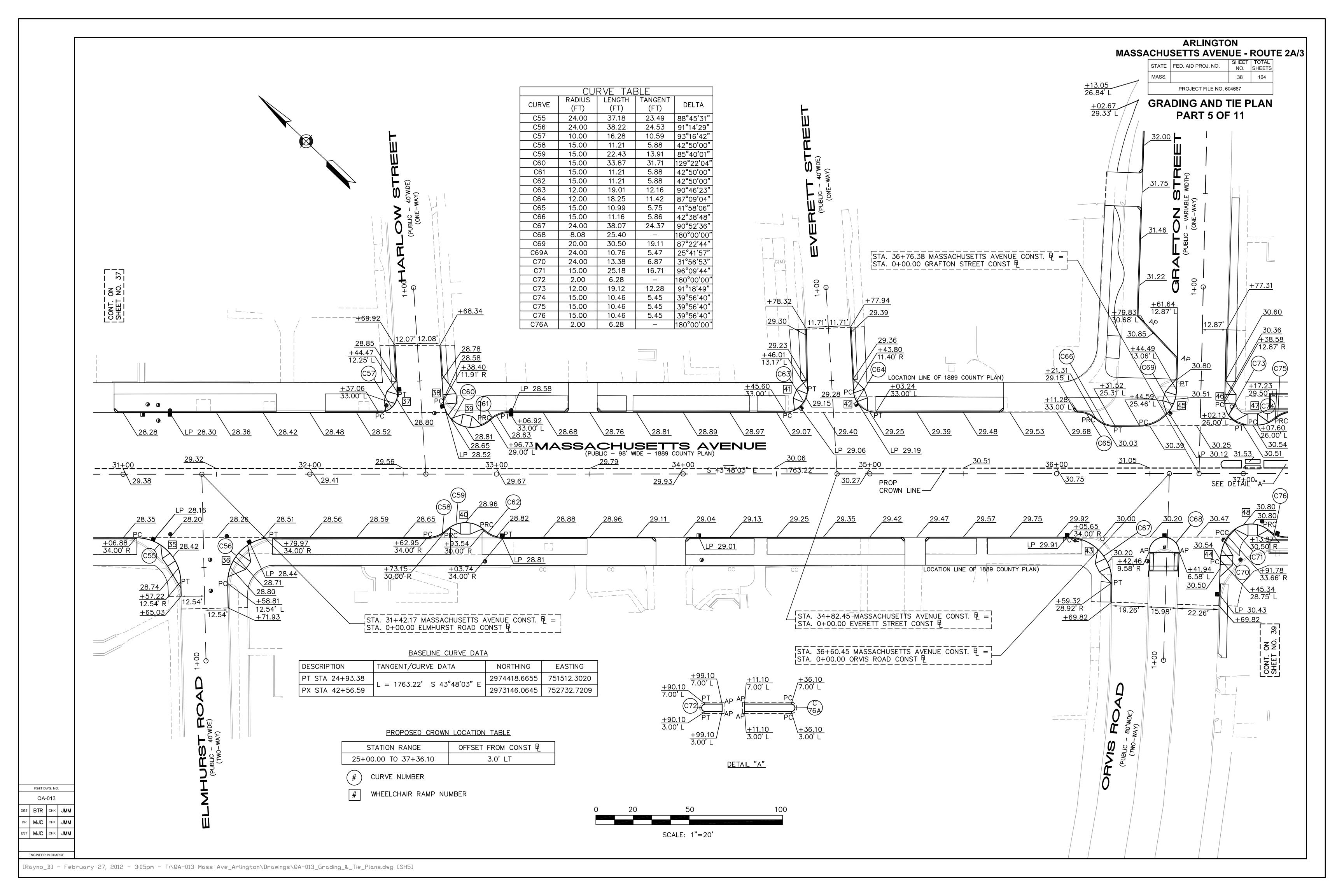
GRADING AND TIE PLANS, SHEET NOS. 34-44 AND THE CROSS SECTIONS, SHEET NOS. 116-164.

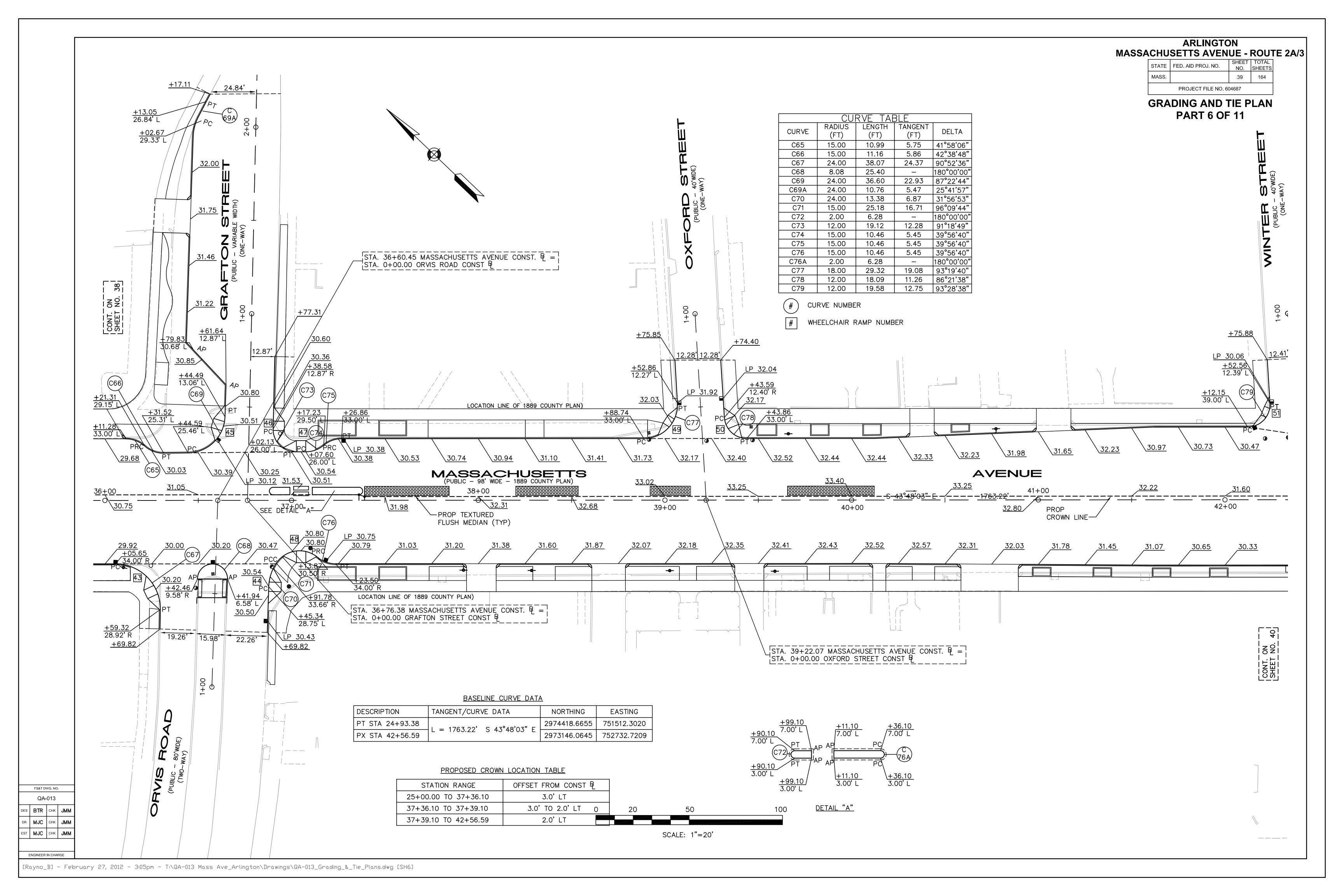


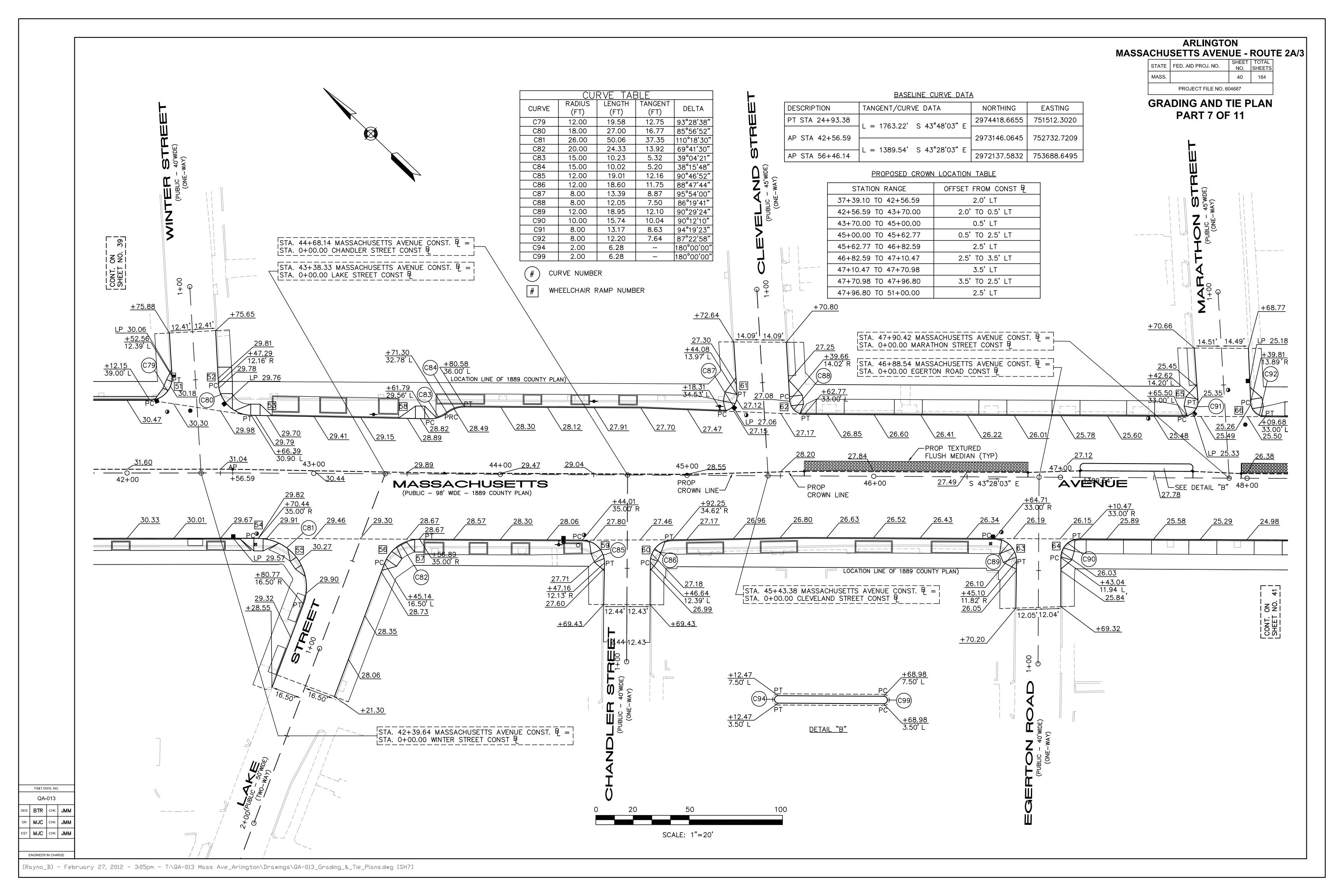


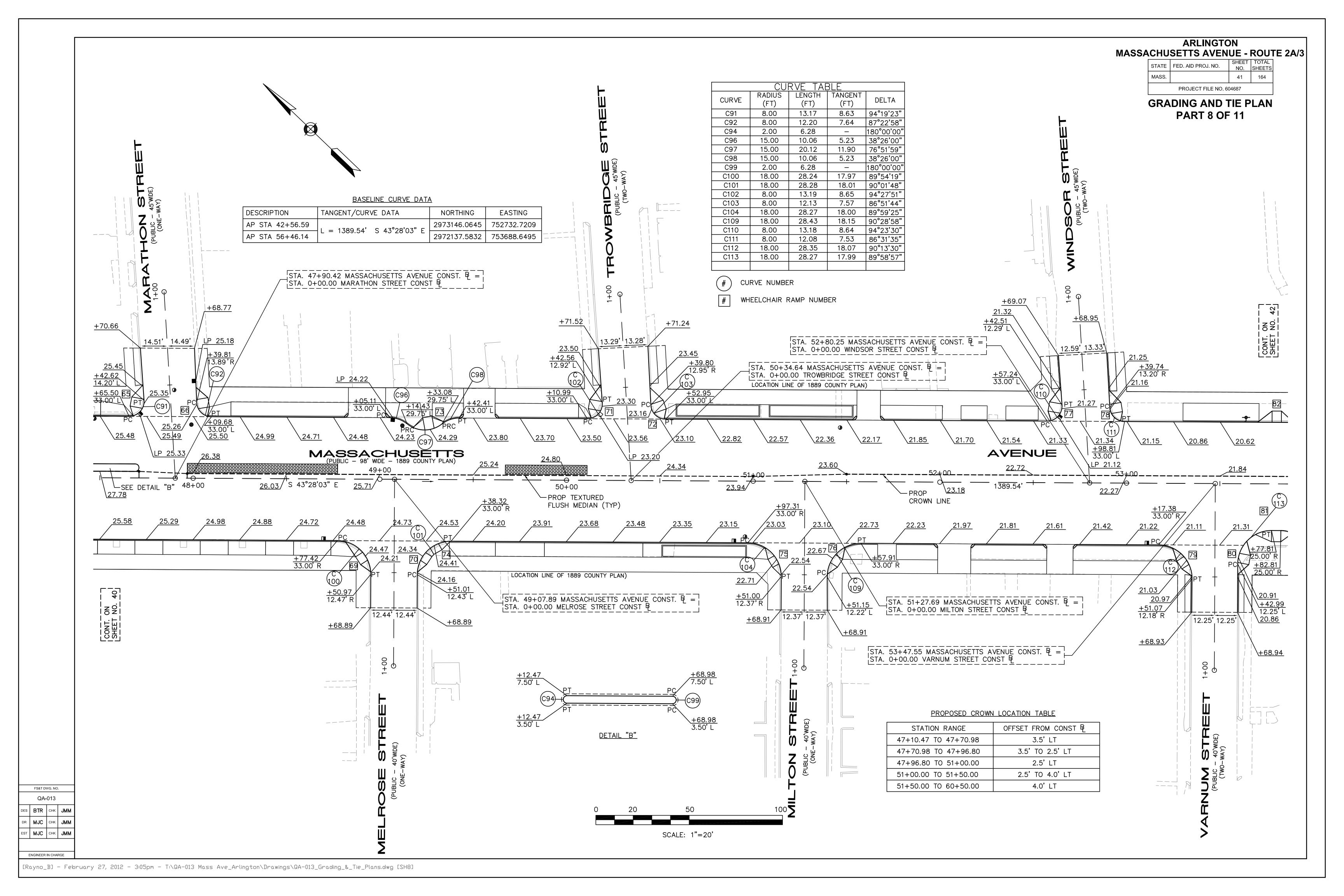


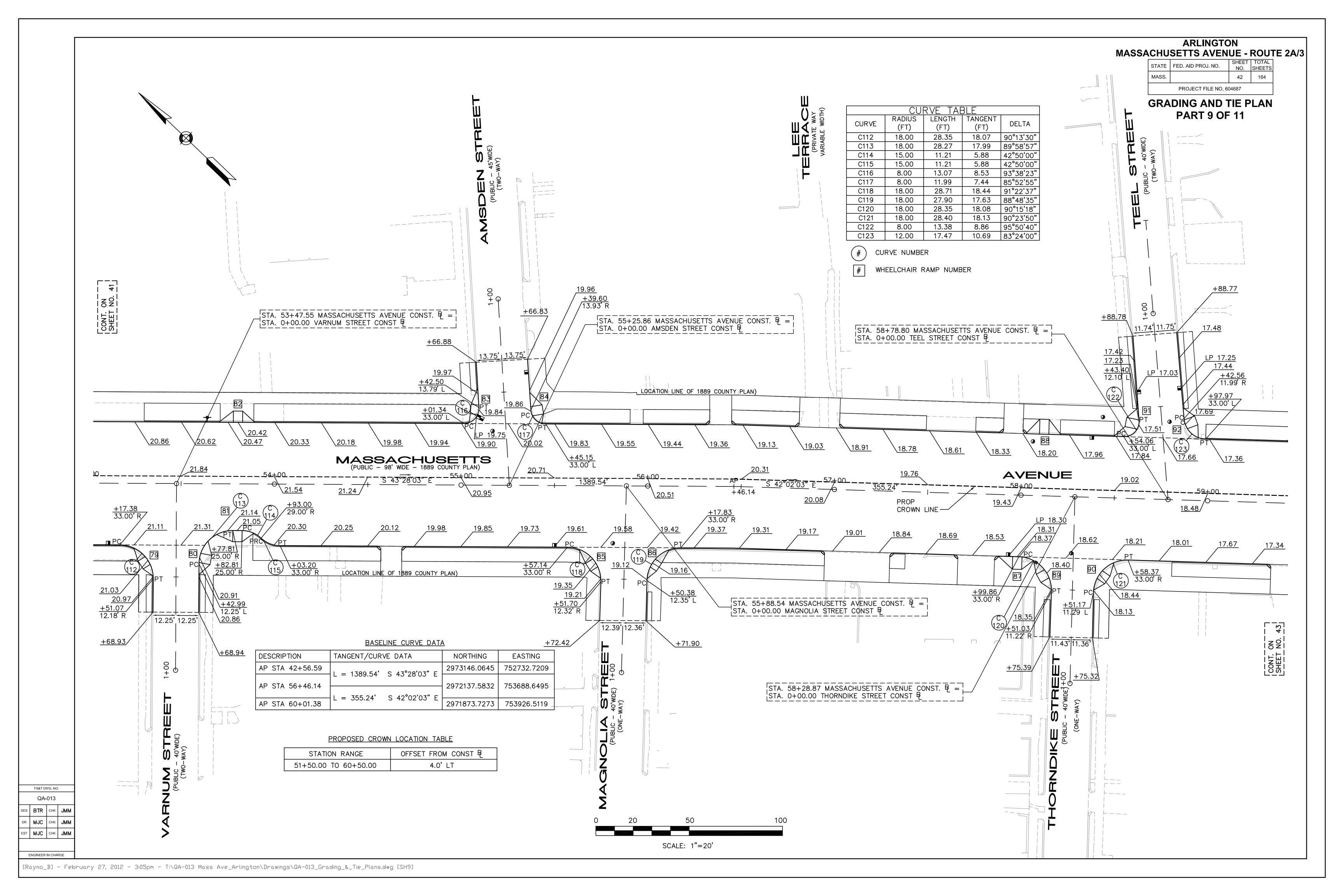


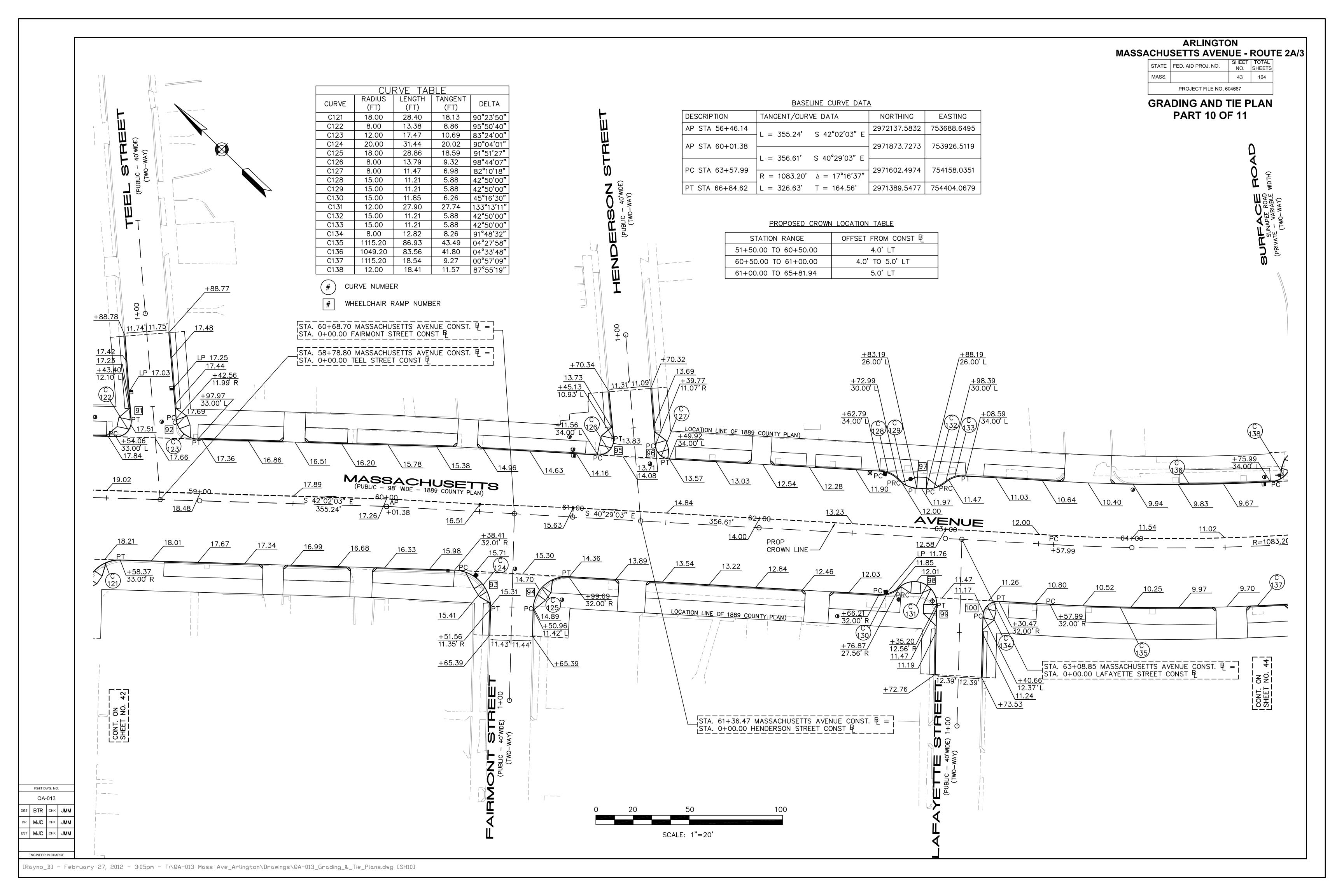


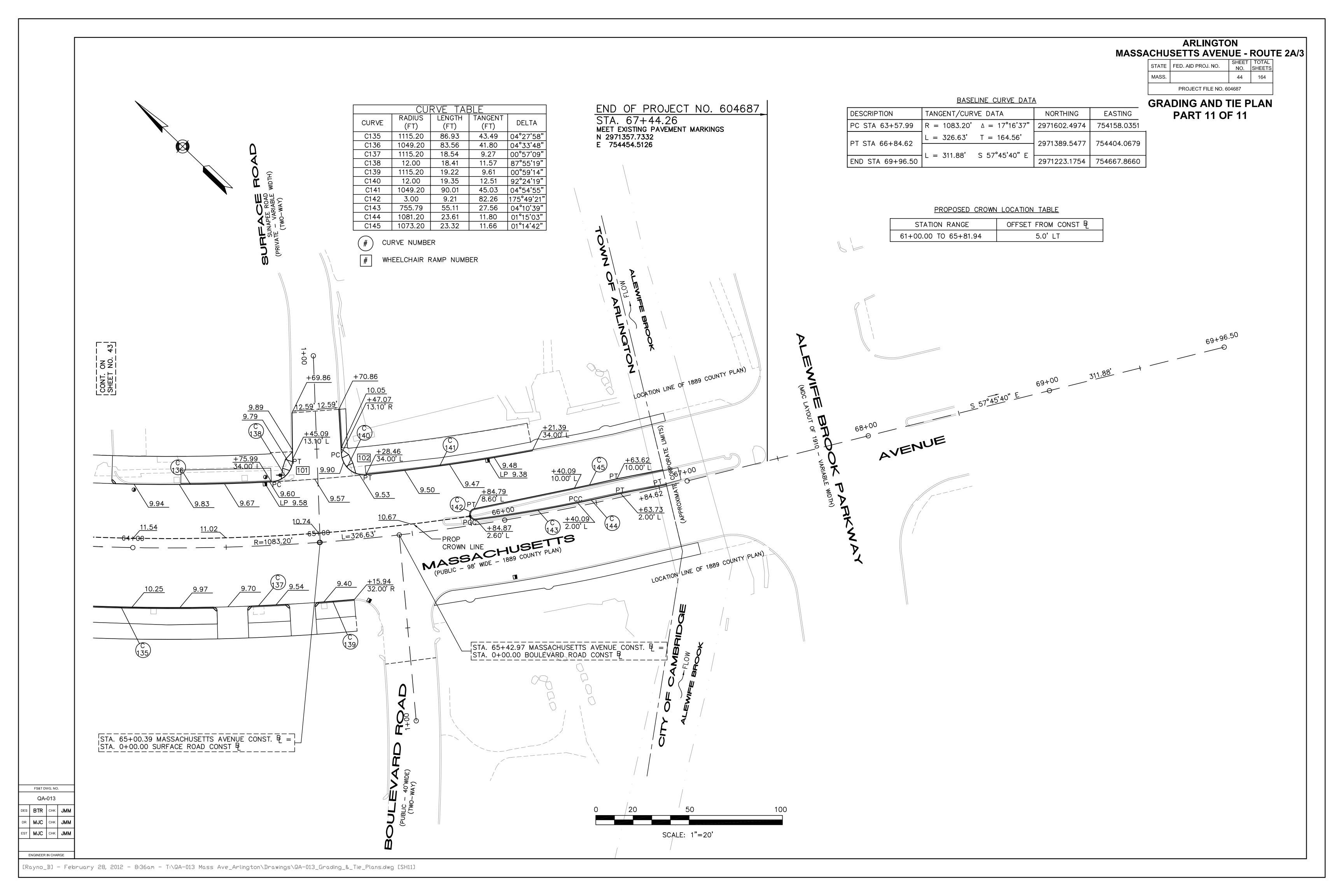


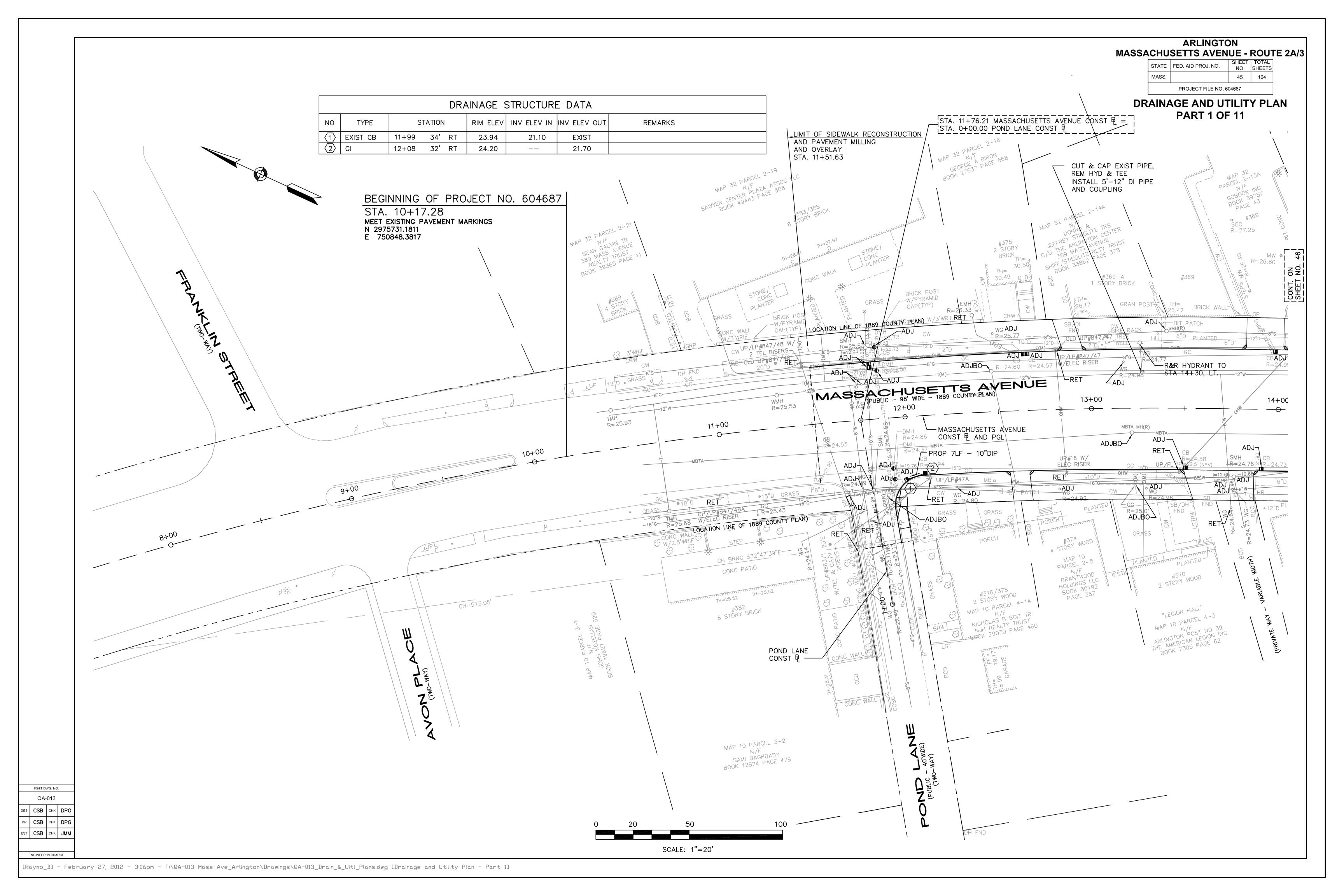


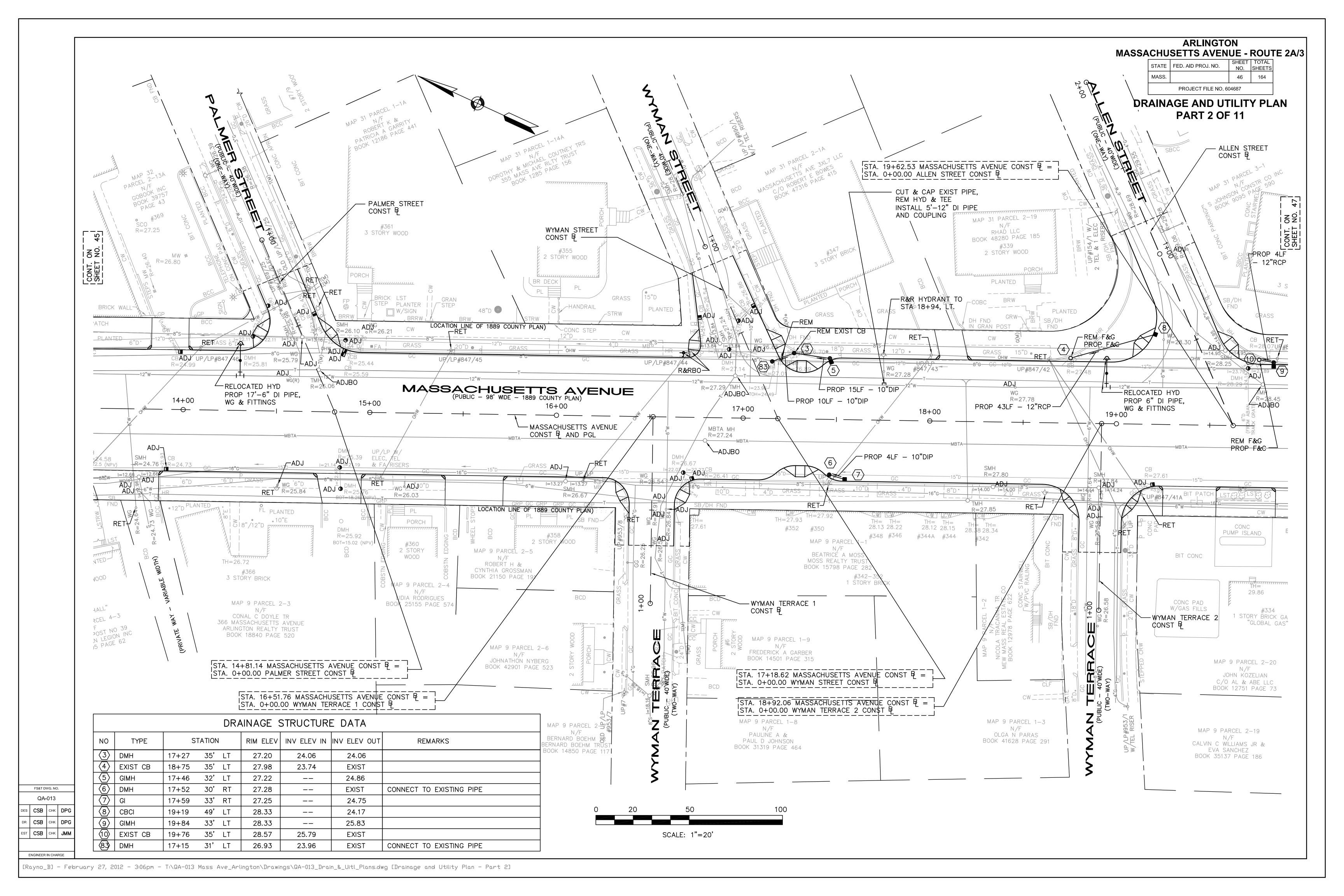


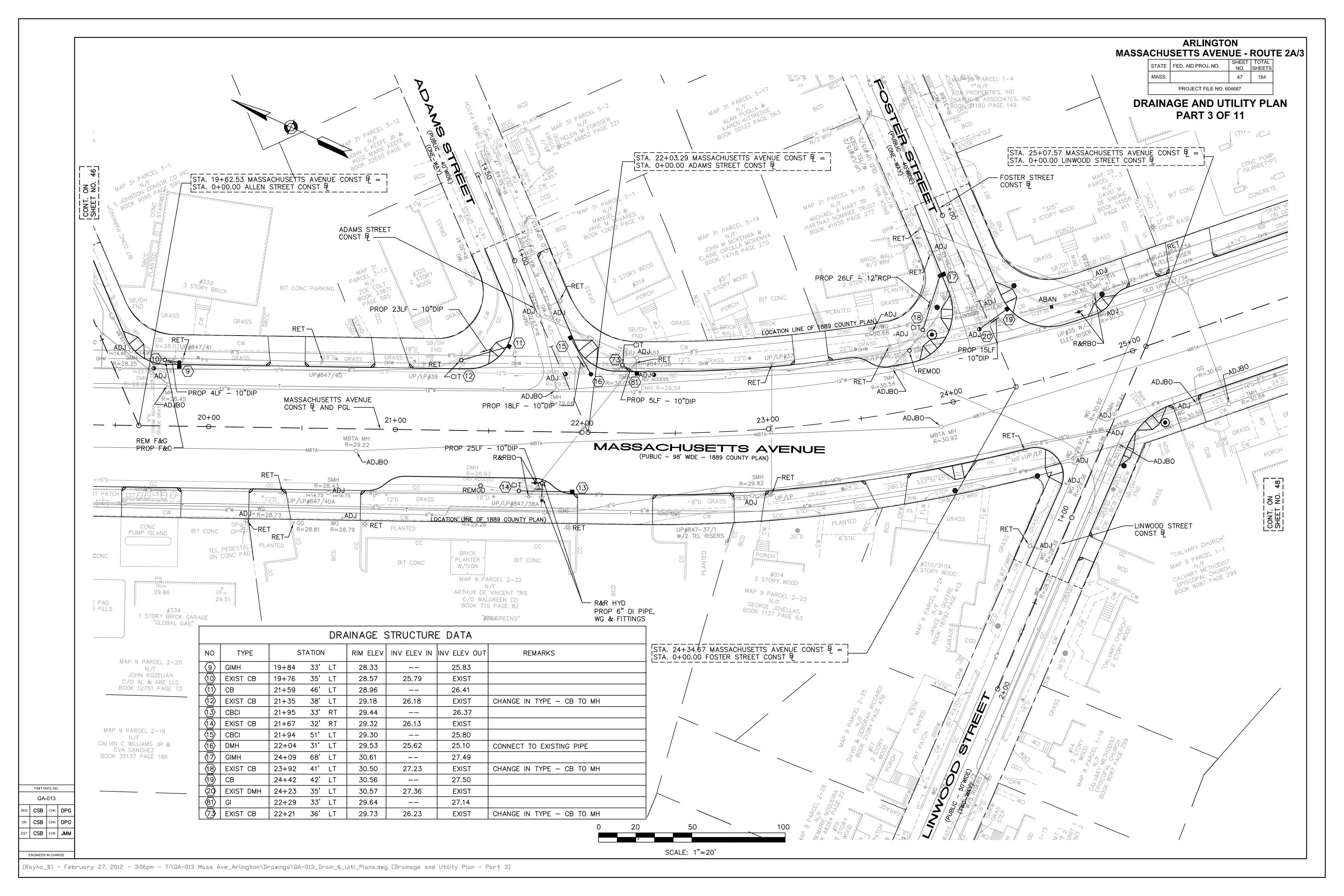


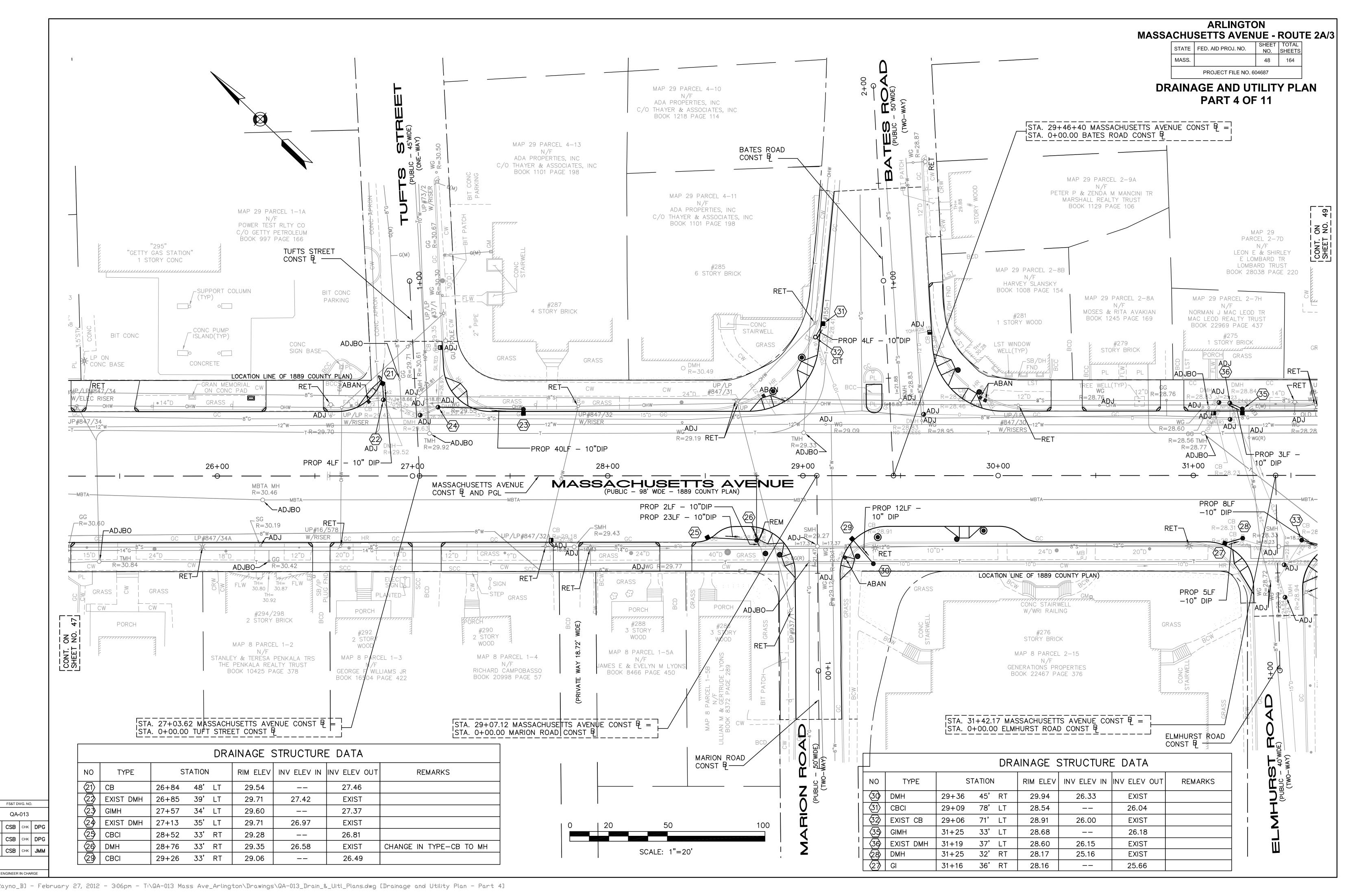


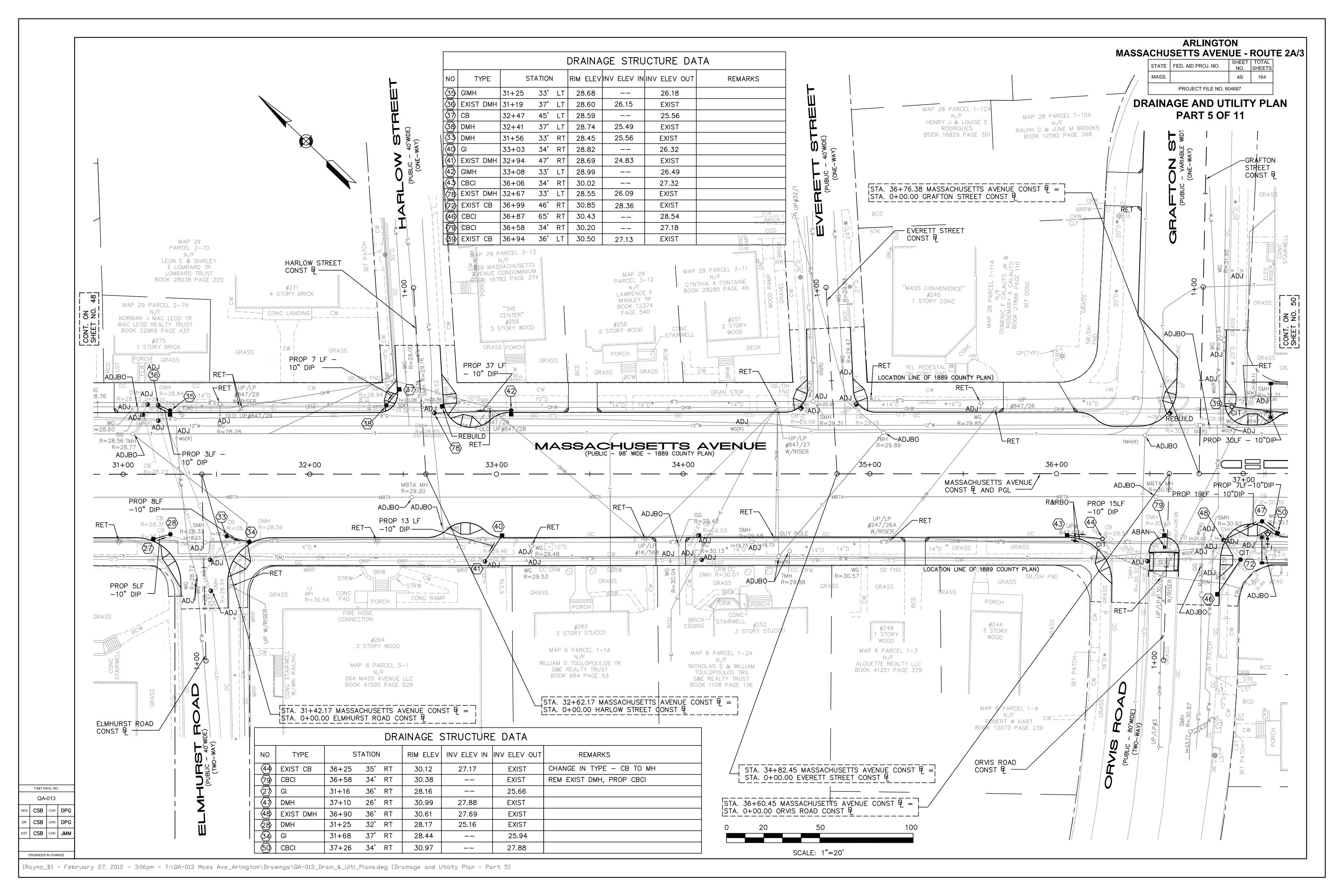


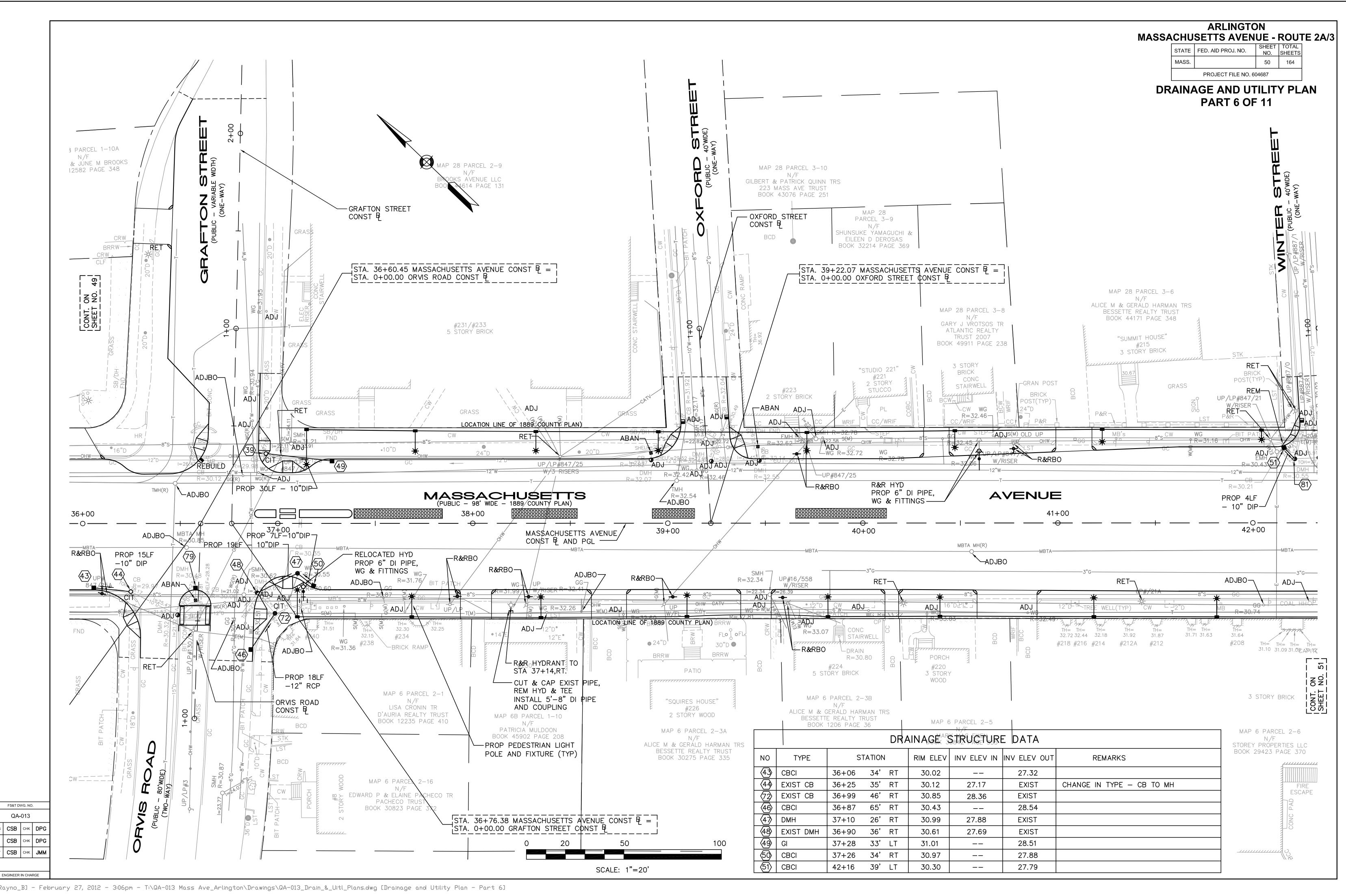


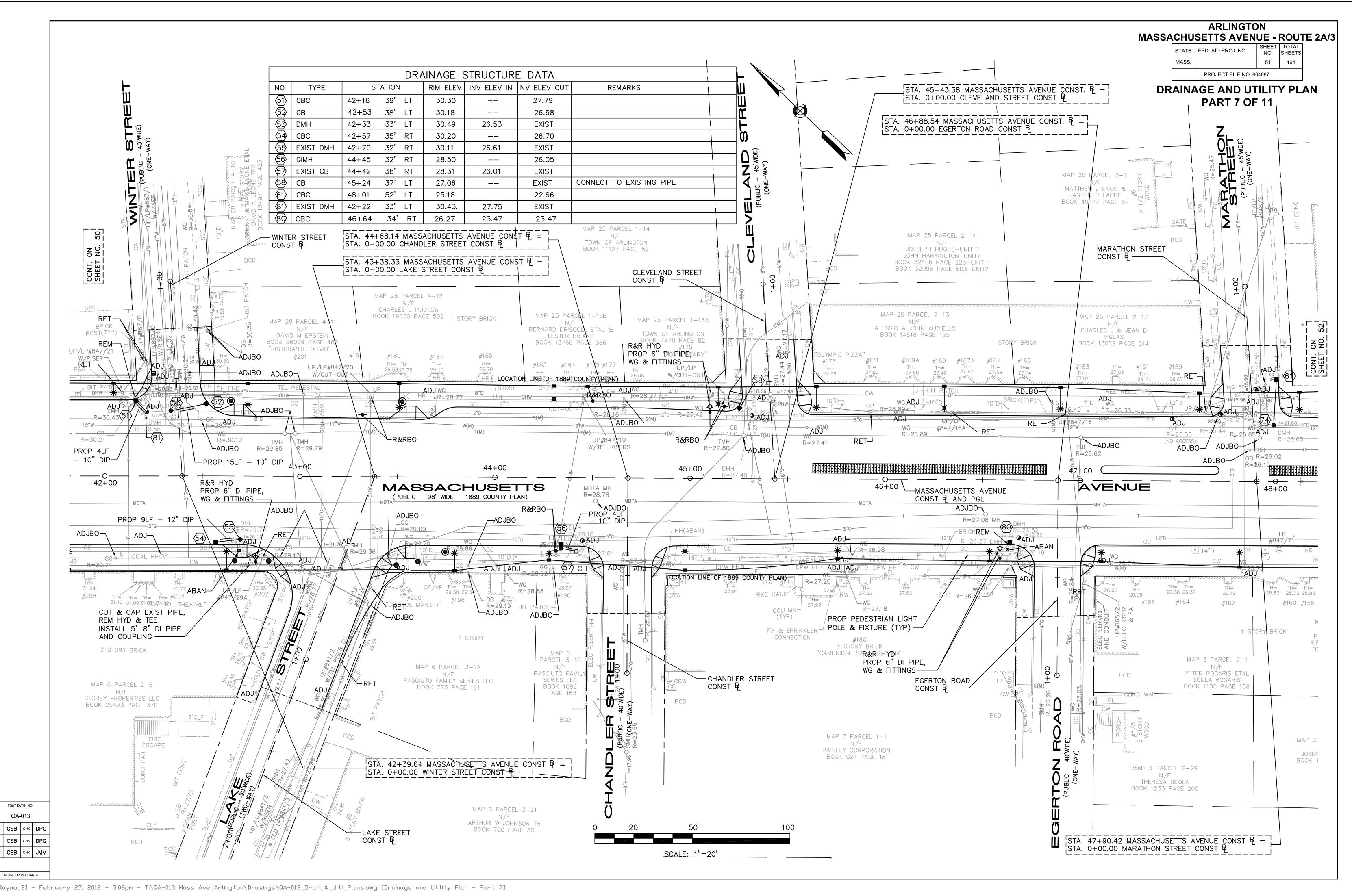


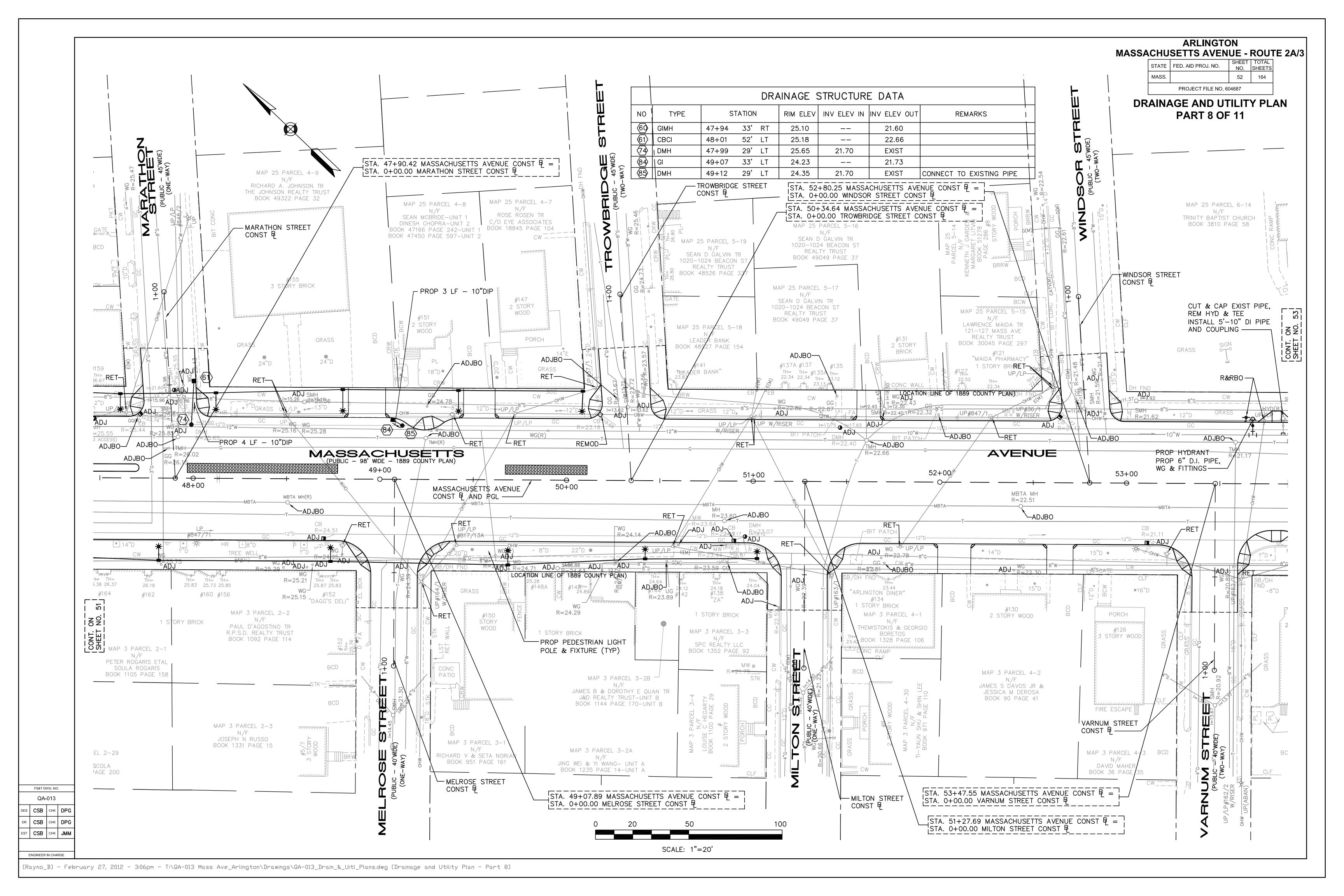


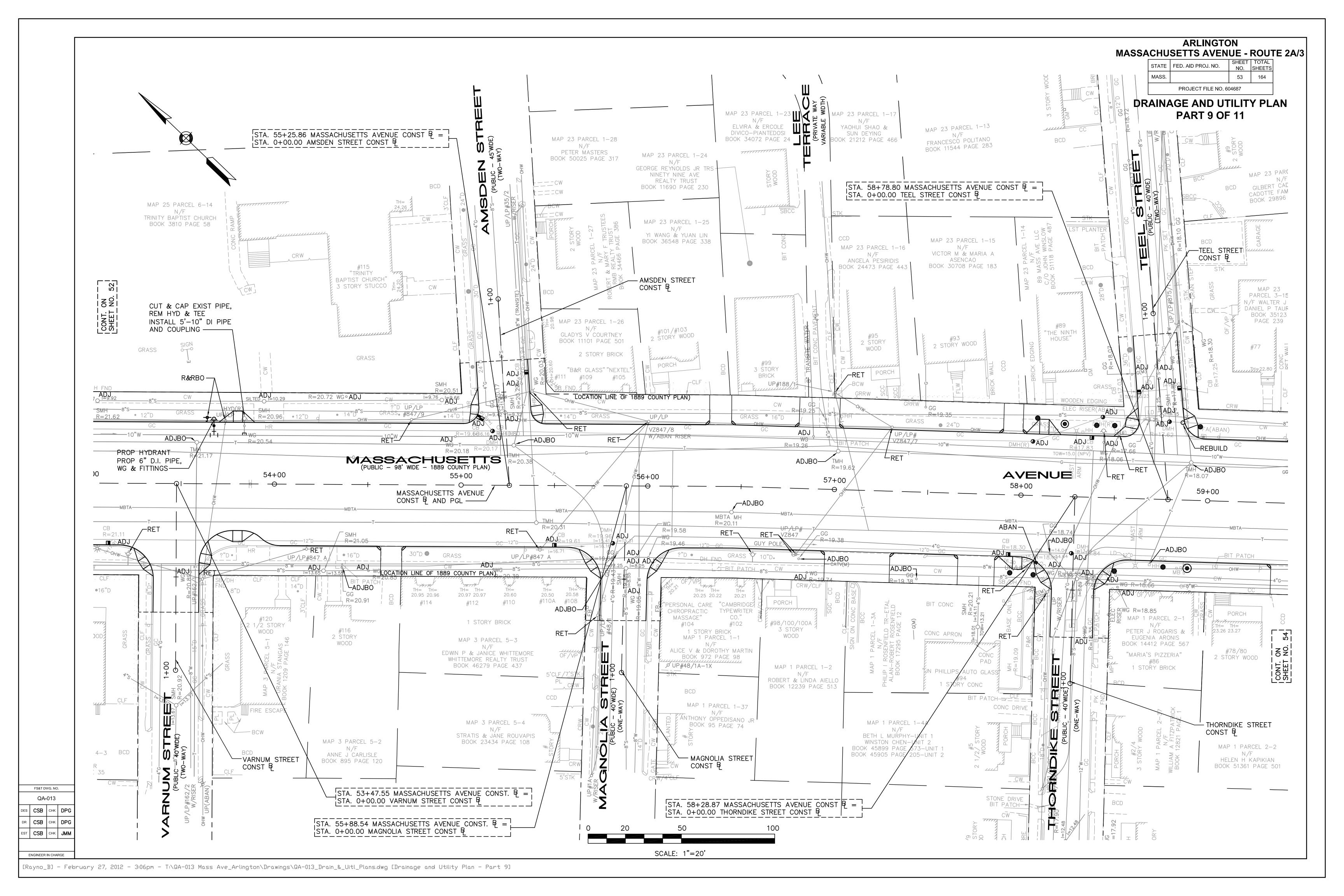


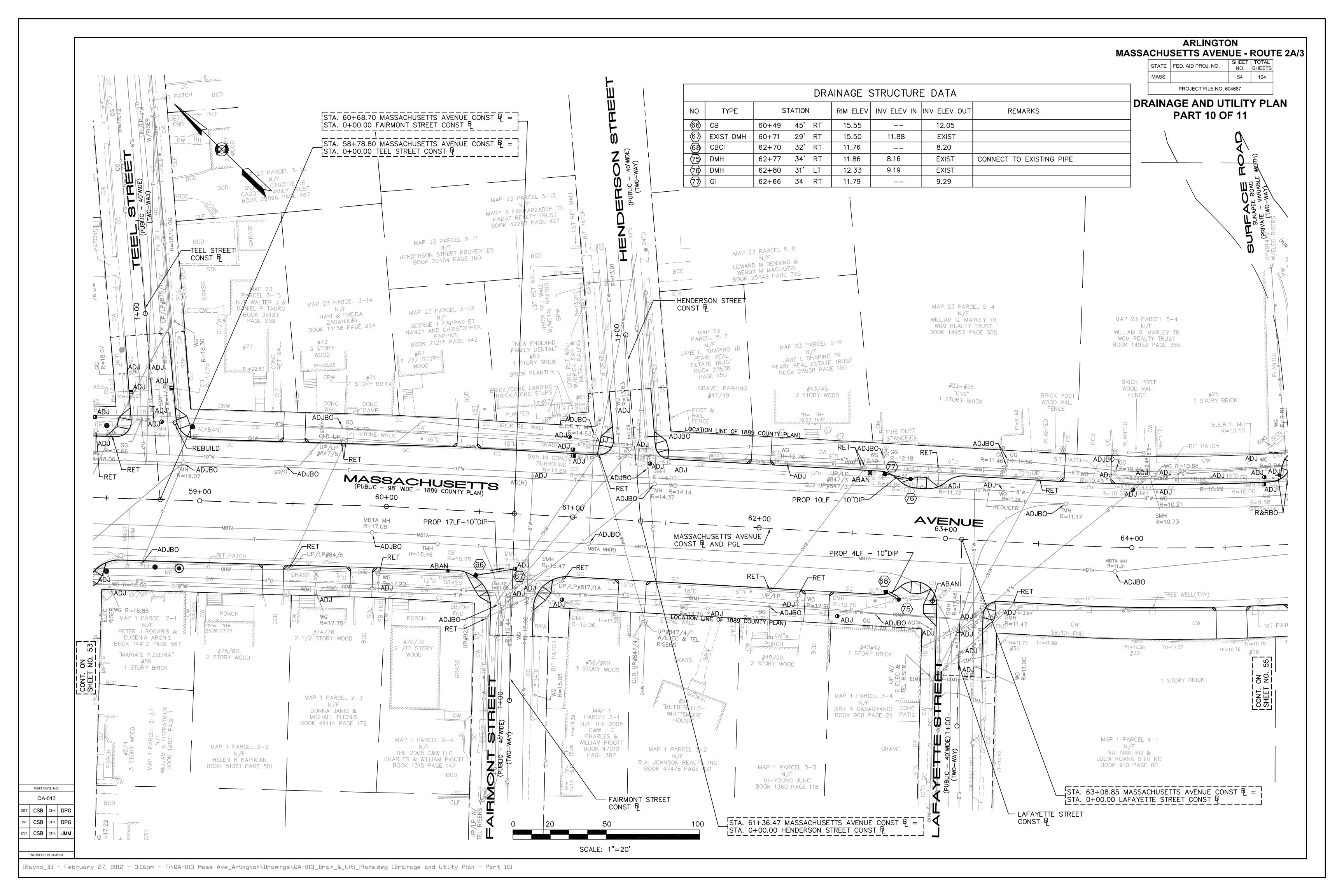


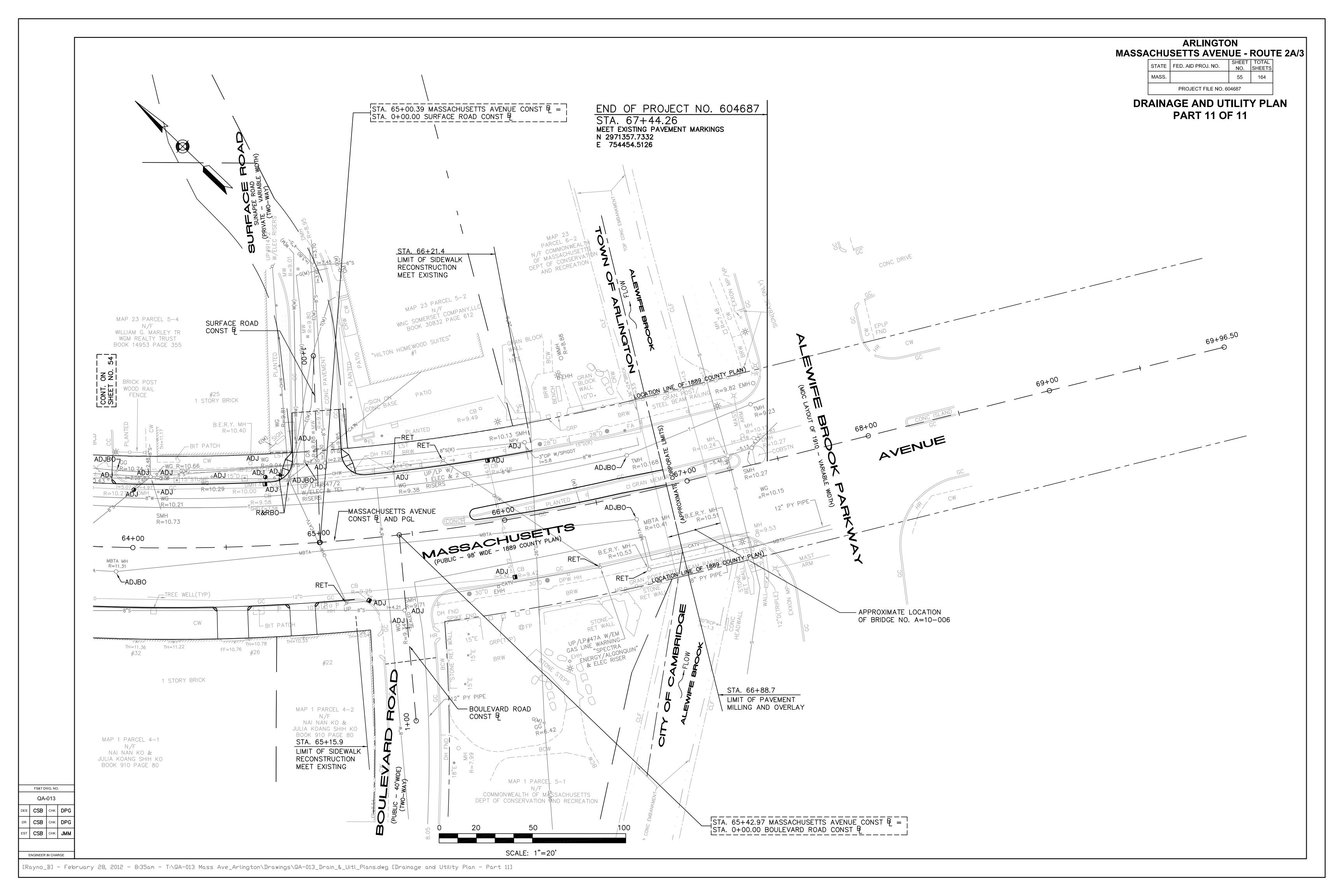


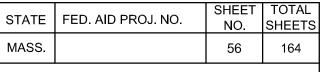






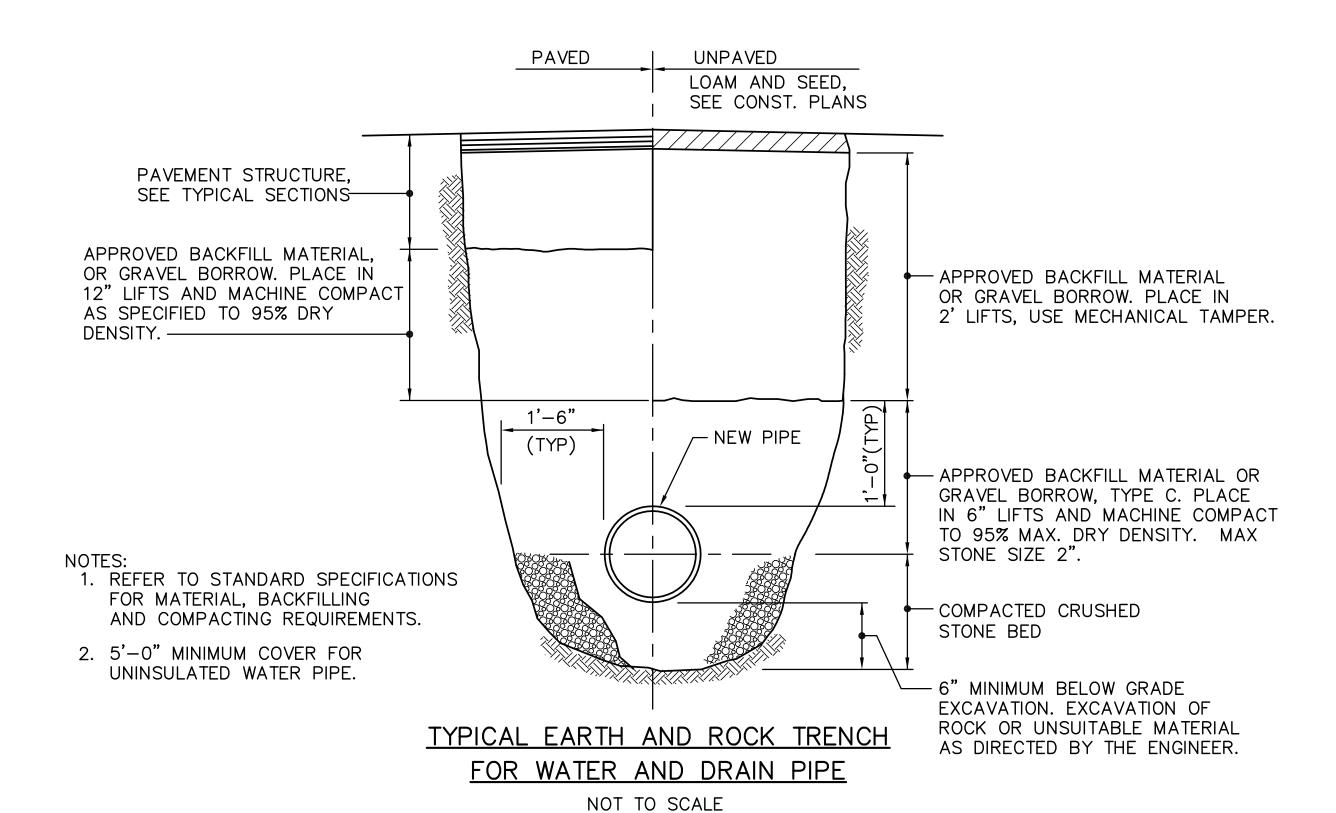


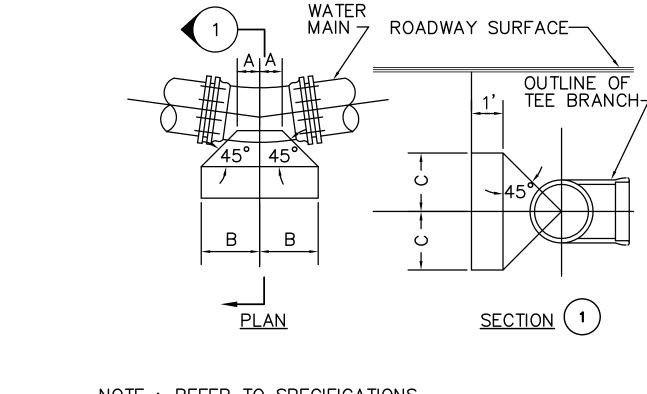




PROJECT FILE NO. 604687

DRAINAGE AND UTILITY DETAILS





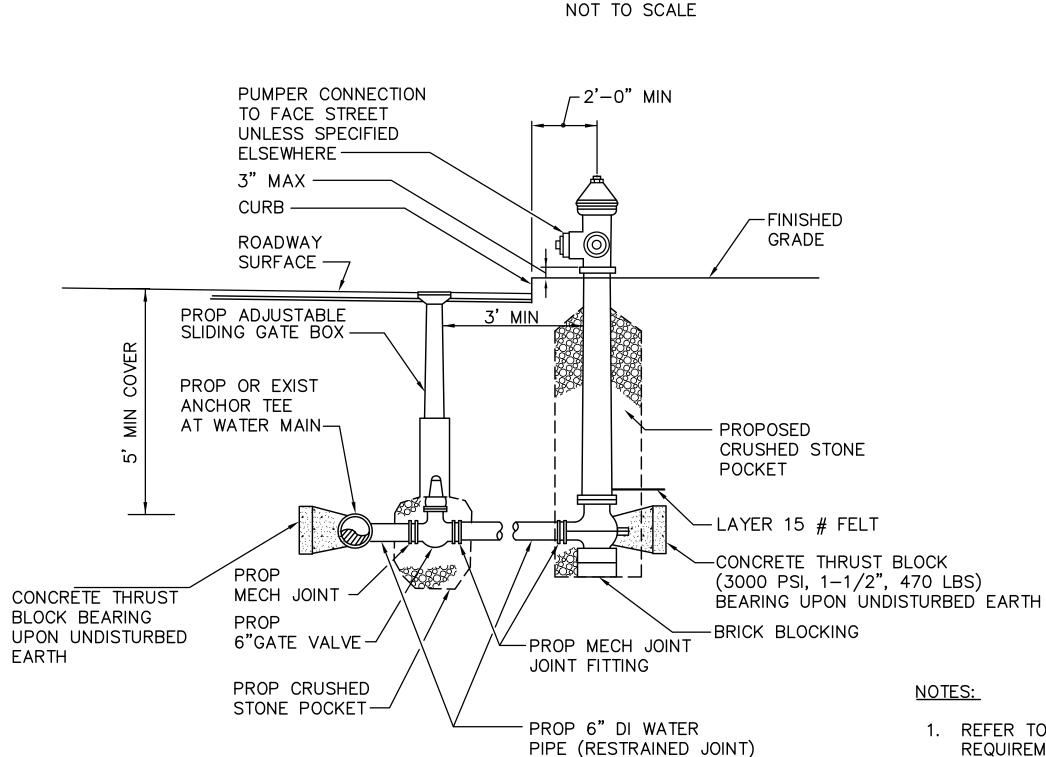
¹/₃₂, ¹/₁₆ 6 10 10 14 14 19 19 10", 12" BEND $\frac{1}{32}$, $\frac{1}{16}$ 6 14 14 20 20 27 27 16" BEND 18 24 24 12 30 24 TEE (BRANCH) 15 16 16 19 19 23 30 23 12 24 * SUBJECT TO FIELD MODIFICATION BY ENGINEER

HORIZONTAL THRUST BLOCK SCHEDULE

TABLE OF DIMENSIONS IN INCHES

NOTE: REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS

THRUST BLOCK DETAIL

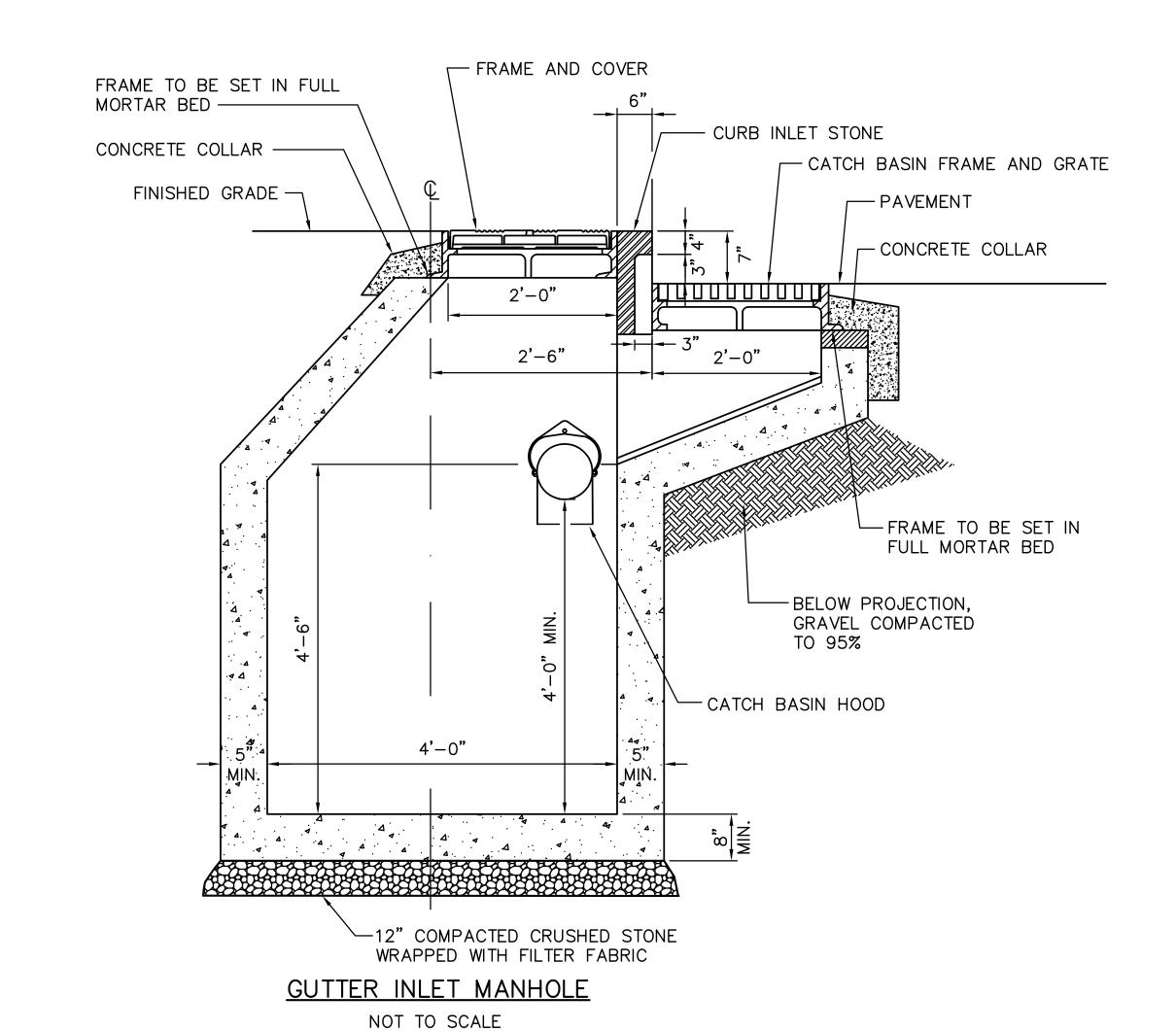


PROPOSED FIRE HYDRANT OR FIRE HYDRANT REMOVED & RESET NOT TO SCALE

TO PROP TEE

NOTES:

- 1. REFER TO SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
- 2. THE CONTRACTOR SHALL RESTRAIN ALL EXISTING PIPE AND FITTINGS WITH CLAMPS, HARNESSES AND/OR ANY OTHER MEANS ACCEPTED BY THE ENGINEER PRIOR TO REMOVING ANY OF THE EXISTING HYDRANT COMPONENTS.
- 3. FOR HYDRANTS RELOCATED TO NEW MAIN CONNECTION LOCATIONS, THE EXISTING TEE WILL BE REMOVED AND REPLACED WITH A MECHANICAL DRESSER COUPLING AND SUITABLL SIZED SECTION OF PIPE.
- 4. ALL HYDRANTS SHALL BE MANUFACTURED BY "WATEROUS" OF THE TRAFFIC MODEL TYPE, CONSISTENT WITH TOWN OF ARLINGTON WATER DEPARTMENT STANDARDS.



FS&T DWG. NO. QA-013 CSB CHK DPG

ENGINEER IN CHARGE

[Rayno_B] - February 27, 2012 - 3:07pm - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Drain_&_Uitl_Details.dwg [MISC1]

7.	EED AID DDO L NO	SHEET	TOTAL
STATE	FED. AID PROJ. NO.	NO.	SHEETS
MASS.		57	164
	PROJECT FILE NO. 60)4687	

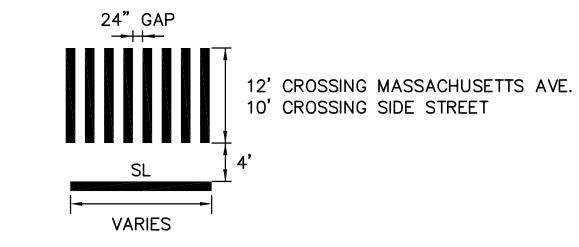
TRAFFIC LEGEND AND NOTES

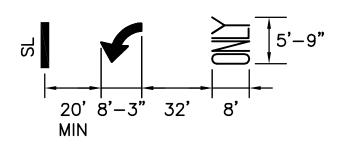
BWLL	BROKEN WHITE	E LANE LINE-6"	. (10' LANE LINE	. 30' SPACE)

- o, (10
- DOTTED WHITE LANE LINE-6", (2' LINE, 6' SPACE)

PAVEMENT MARKINGS - THERMOPLASTIC

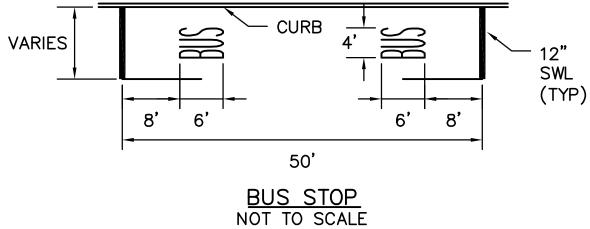
- SOLID WHITE EDGE LINE-6"
- SOLID WHITE LINE
- SOLID WHITE LANE LINE-6"
- WHITE TRANSVERSE LINE-12", 15' O.C., 3:1 SLOPE
- DOUBLE YELLOW CENTER LINE-2-6" LINES
- DOTTED YELLOW LANE LINE-6", (2' LINE, 6' SPACE)
- SOLID YELLOW EDGE LINE-6"
- SOLID YELLOW LINE SYL
- YELLOW TRANSVERSE LINE-12", 15' O.C., 3:1 SLOPE
- STOP LINE, 12" WHITE LINE (SEE DETAIL BELOW)
- CROSSWALK, 24" WHITE LONGITUDINAL LINES (SEE DETAIL BELOW)
- TWO-WAY YELLOW/YELLOW SLOTTED PAVEMENT MARKER (40' SPACING TYP)
- ONE-WAY WHITE SLOTTED PAVEMENT MARKER (80' SPACING TYP)
- TWO-WAY YELLOW/RED SLOTTED PAVEMENT MARKER (20' SPACING TYP)
- EXISTING DIRECTION OF FLOW
- PROPOSED DIRECTION OF FLOW

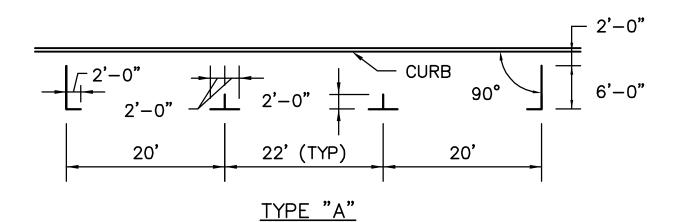


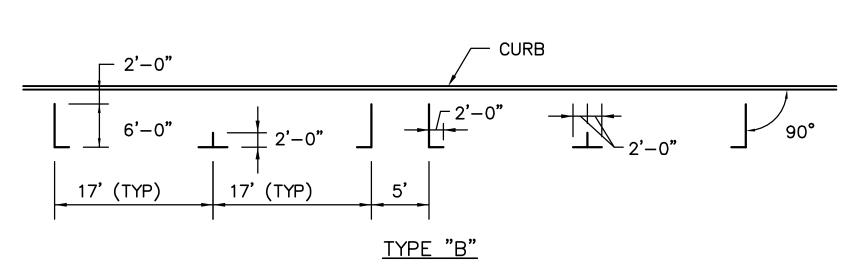


TURN ARROW AND LEGEND NOT TO SCALE

8' 6' 50'







PARKING STALL MARKINGS NOT TO SCALE

NOTE: MARKINGS FOR ALL PARKING STALLS SHALL BE 4" SWL

PROPOSED SIGNAL EQUIPMENT

PULL BOX

- VEHICULAR SIGNAL HEAD
- VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED

ELECTRIC MANHOLE (NUMBER AS NOTED)

ELECTRIC PULL BOX (12"x12") SD2.031

SIGNAL POST

MAST ARM

LIGHT POST

EXISTING SIGNAL EQUIPMENT

(XX)

JOINT USE POLE

CONTROLLER CABINET

ELECTRIC HAND HOLE

PULL BOX LOCATION

VEHICULAR SIGNAL HEAD

PEDESTRIAN SIGNAL HEAD

PEDESTRIAN PUSH BUTTON

MAST ARM AND SHAFT AND BASE

CONTROL CABINET, GROUND MOUNTED

CONTROL CABINET, POST MOUNTED

OPTICAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR

SIGNAL POST AND BASE

TELEPHONE MANHOLE (NUMBER AS NOTED)

- PEDESTRIAN SIGNAL HEAD
- SIGNAL POST AND BASE
- MAST ARM AND SHAFT AND BASE **—**
- PEDESTRIAN PUSH BUTTON, SIGN AND SADDLE
- OPTICAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR
- OPTICAL PRE-EMPTION CONFIRMATION STROBE
- CONTROL CABINET, GROUND MOUNTED
- PULL BOX (12"x12") SD2.031

DETECTOR LEAD EXISTING CONDUIT

PROPOSED CONDUIT (SINGLE BANK)

PROPOSED CONDUIT (ENCASED IN CDF) __X__X_

PROPOSED CONDUIT (MULTIPLE BANK, AS NOTED)

OVERHEAD CABLE

= =PROPOSED CONDUIT, TO BE CAPPED

DIRECT BURIAL CABLE

FS&T DWG. NO. QA-013

JKM CHK WW JKM CHK WW

ENGINEER IN CHARGE

[martin_ja] - February 28, 2012 - 11:15am - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic_Legend.dwg [Layout1]

1. FINAL LOCATION OF ALL TRAFFIC CONTROL DEVICES SHALL BE AS REQUIRED BY THE ENGINEER. OFFSETS LISTED ARE APPROXIMATE

STEADY CIRCULAR RED

STEADY CIRCULAR YELLOW

STEADY CIRCULAR GREEN

STEADY RED LEFT ARROW

STEADY YELLOW LEFT ARROW

STEADY GREEN LEFT ARROW

STEADY RED RIGHT ARROW

STEADY YELLOW RIGHT ARROW

STEADY GREEN RIGHT ARROW

WALK - LUNAR WHITE

OR PROPOSED CHANGES TO EXISTING CONDITIONS:

TO BE ABANDONED

ADJUST TO GRADE

NOT IN CONTRACT

REMOVE AND DISCARD

REMOVE AND RESET

REMOVE AND STACK

EXISTING POLE-MOUNTED SIGN

EXISTING

MODIFY

PROPOSED

REMOVE

RETAIN

DW

NOTE:

(EXIST)

(MOD)

(PM)

(PROP)

(R&D)

(R&R)

(R&S)

(REM)

(RET)

GENERAL NOTES:

FLASHING INDICATION (COLOR NOTED)

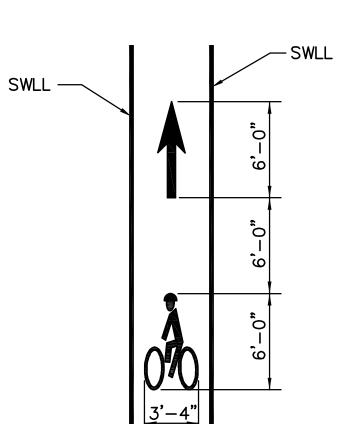
DON'T WALK - PORTLAND ORANGE

THE FOLLOWING LABELS MAY BE USED TO DENOTE EXISTING CONDITIONS

FLASHING DON'T WALK - PORTLAND ORANGE

STEADY GREEN VERTICAL ARROW

- THE CONTRACTOR SHALL HOLD A MINIMUM CLEARANCE OF ONE FOOT BETWEEN ANY LOOP DETECTOR AND ANY EXISTING UTILITY COVER.
- ALL CONDUIT INSTALLED UNDER ROADWAYS SHALL BE ENCASED AS NOTED ON THE PLANS.
- CENTER OF SHARED LANE MARKINGS SHALL BE LOCATED 12 FEET FROM EDGE OF ROAD WHEN ADJACENT TO ON-STREET PARKING LANES OR BUS STOPS. WHERE NO PARKING LANES EXIST, CENTER OF SHARED LANE MARKINGS SHALL BE LOCATED 4 FEET FROM EDGE LINE, OR EDGE OF ROAD IF NO EDGE LINE PRESENT.
- PLACEMENT OF LONGITUDINAL LINES OF CROSSWALK SHALL AVOID VEHICLE AND BICYCLE WHEEL PATHS.

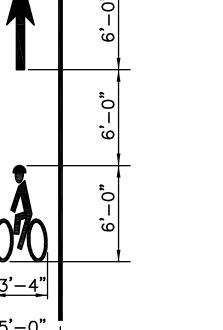


3'-4"

SHARED LANE MARKING NOT TO SCALE

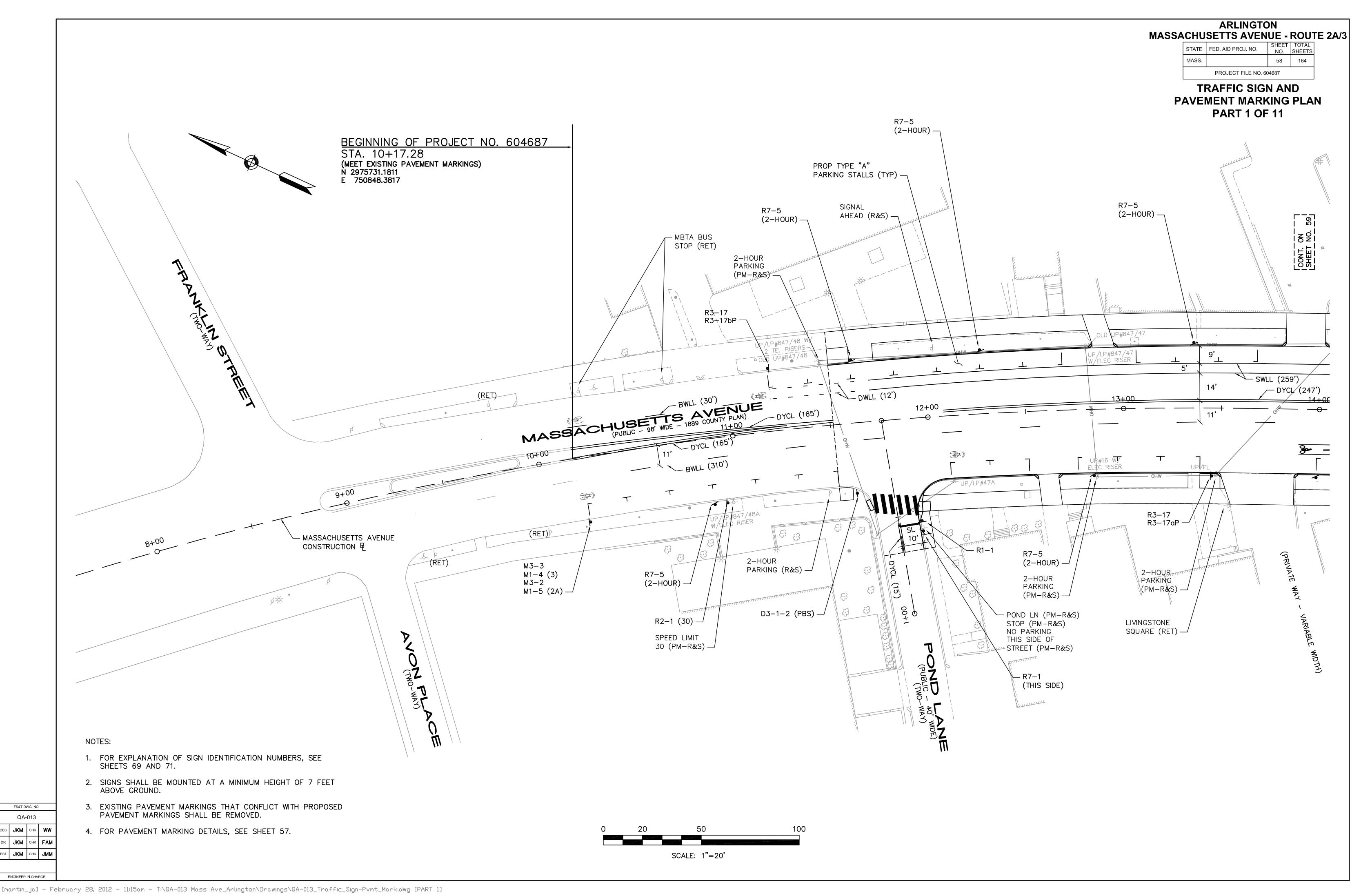
CROSSWALK AND STOP LINE

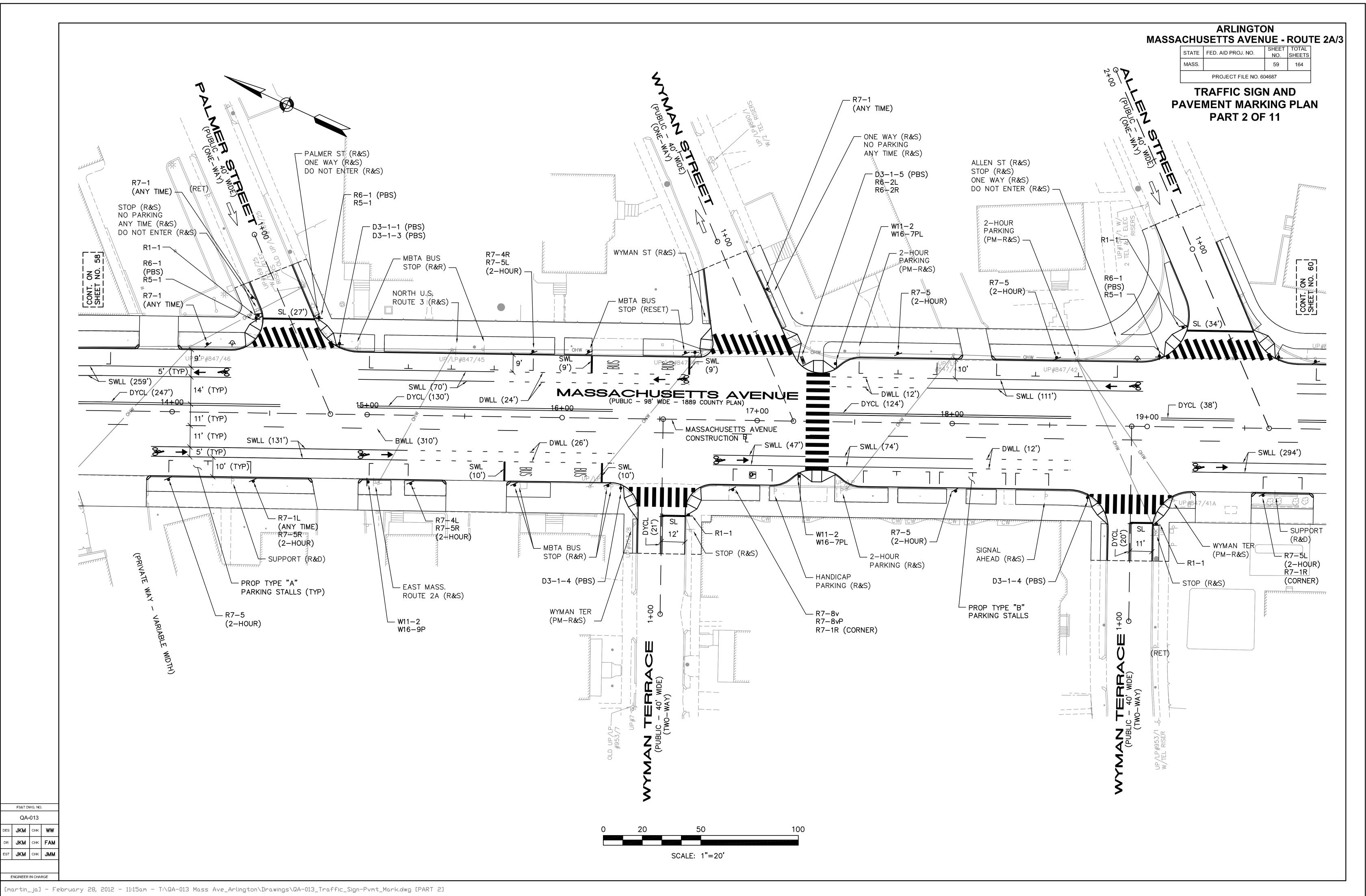
NOT TO SCALE

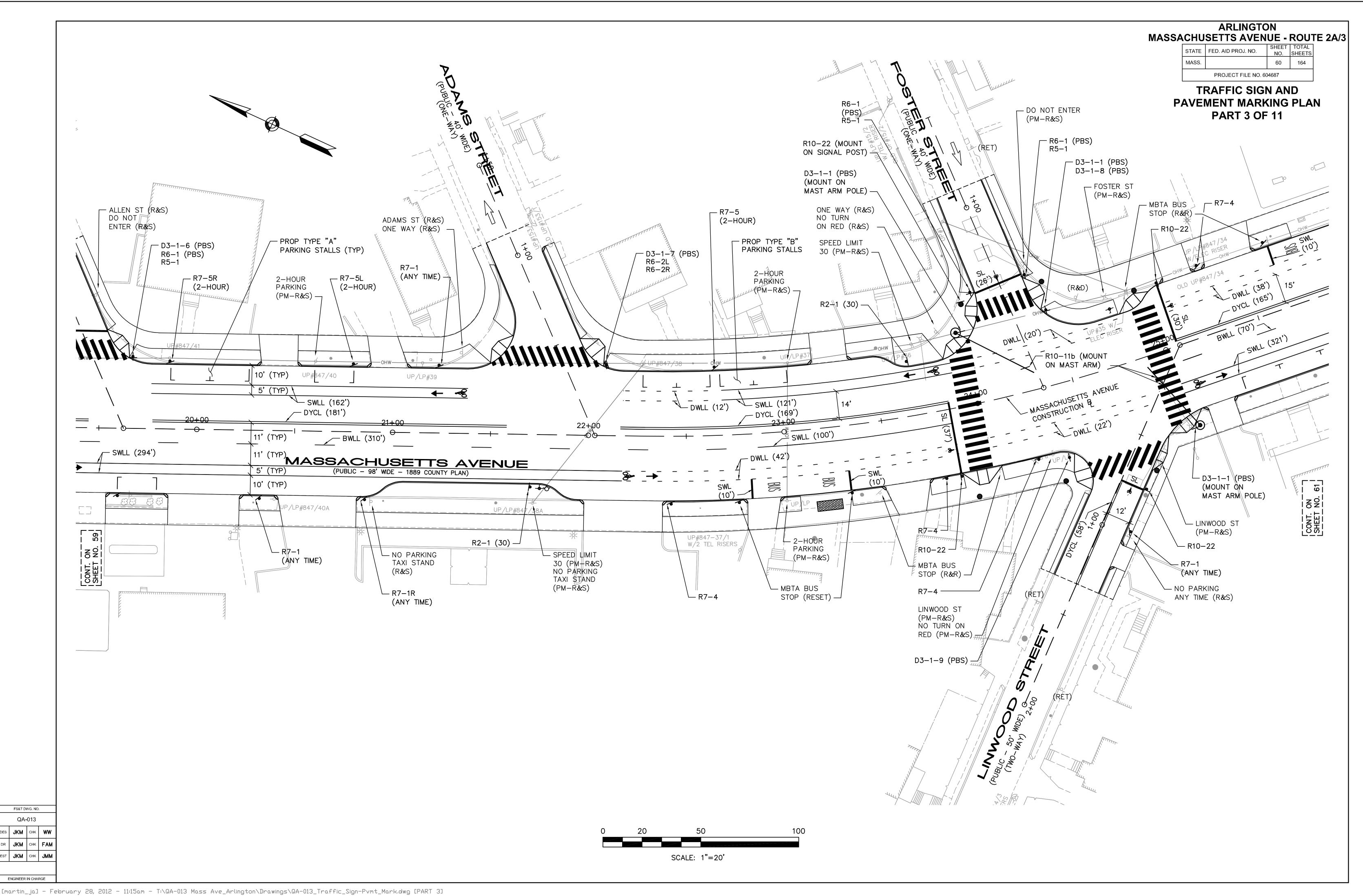


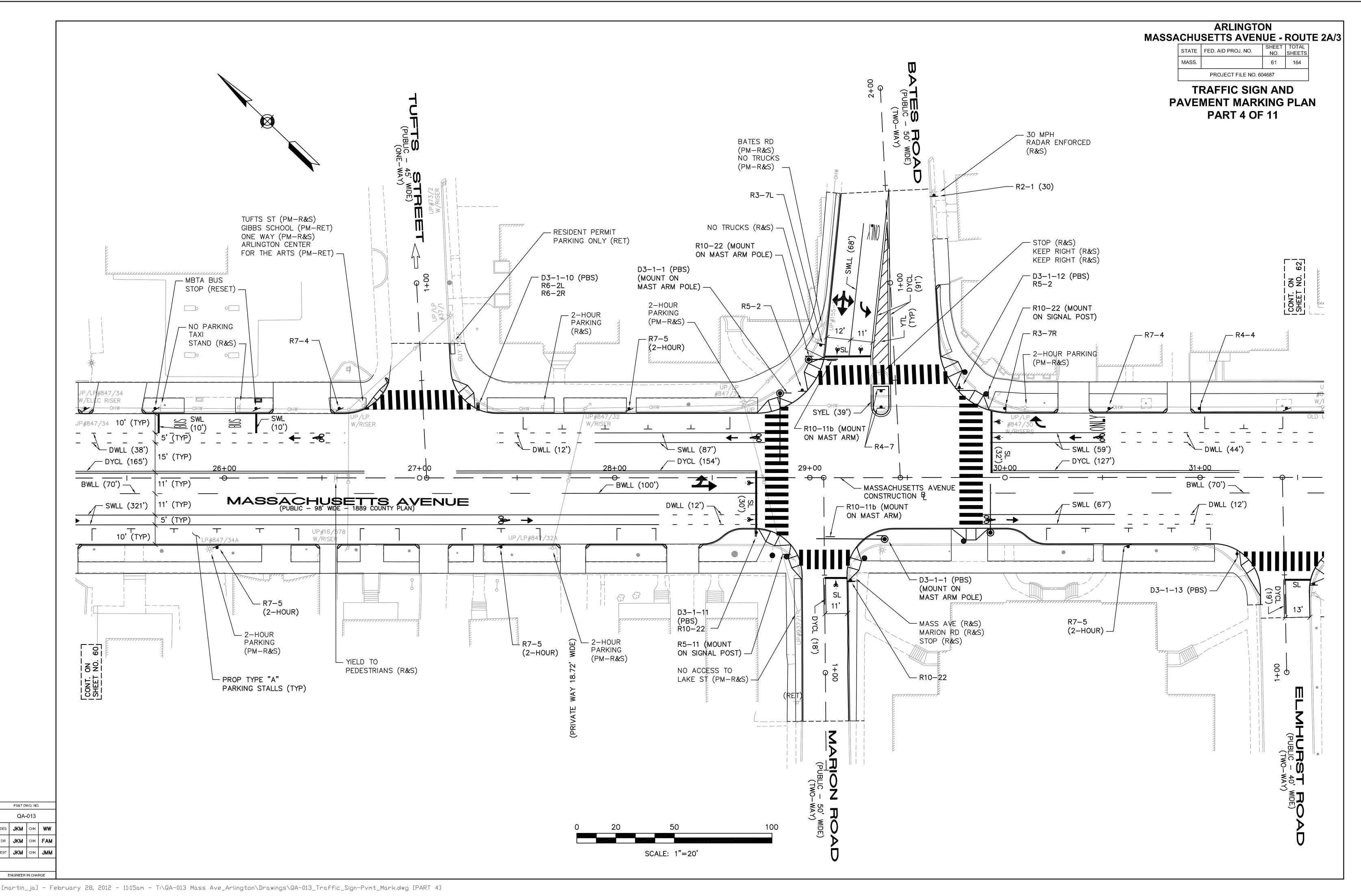
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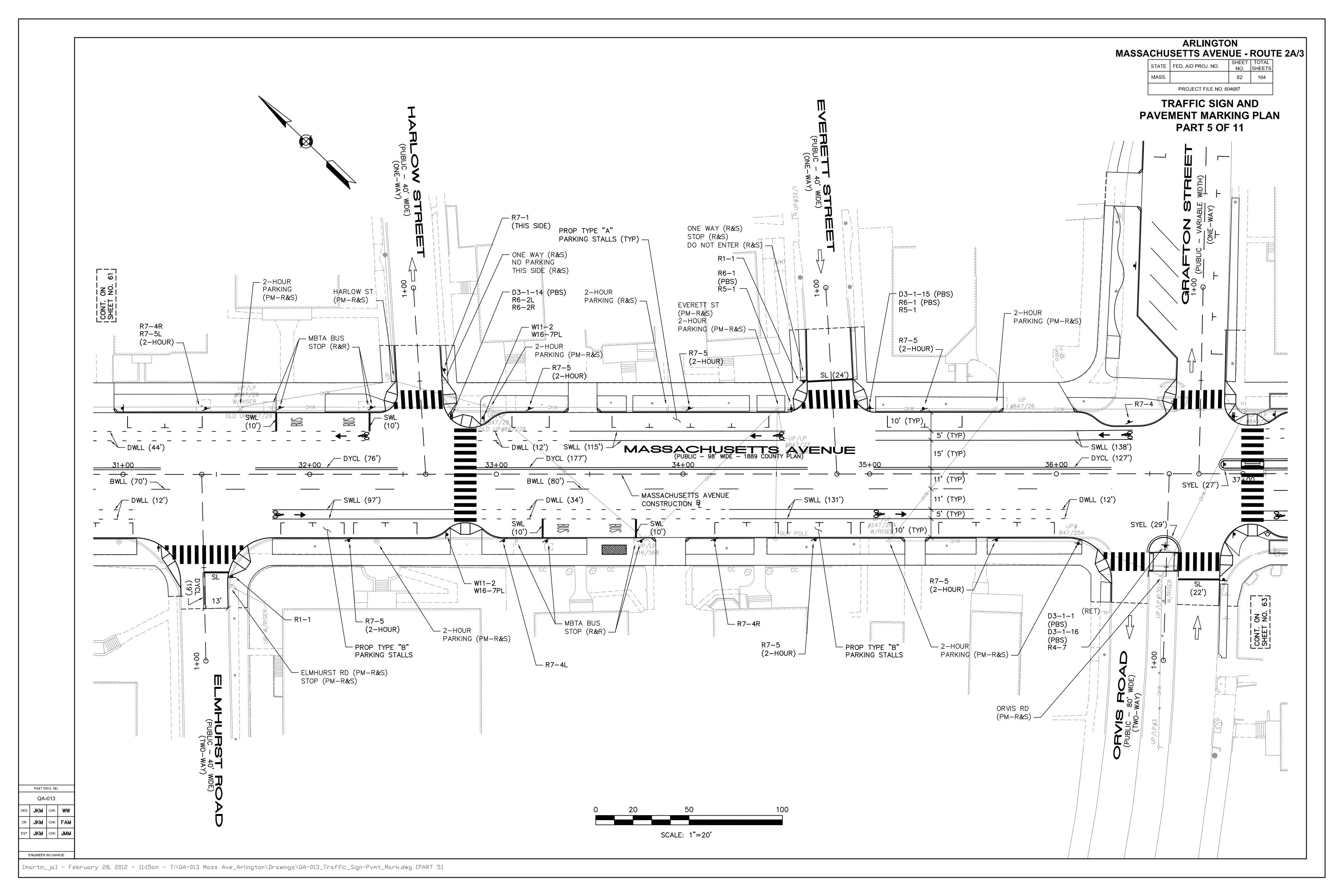
5'-0" BIKE LANE MARKINGS NOT TO SCALE

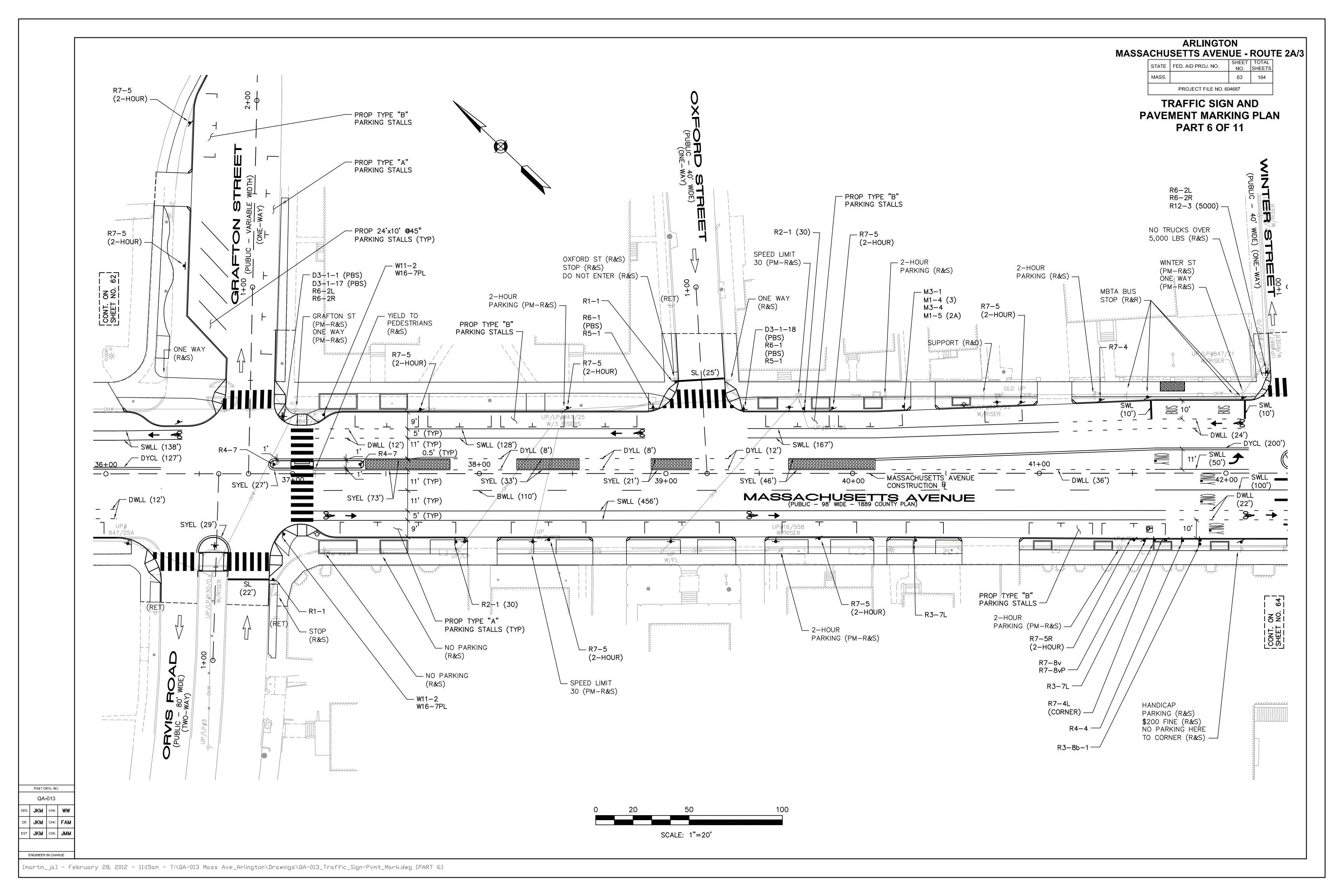


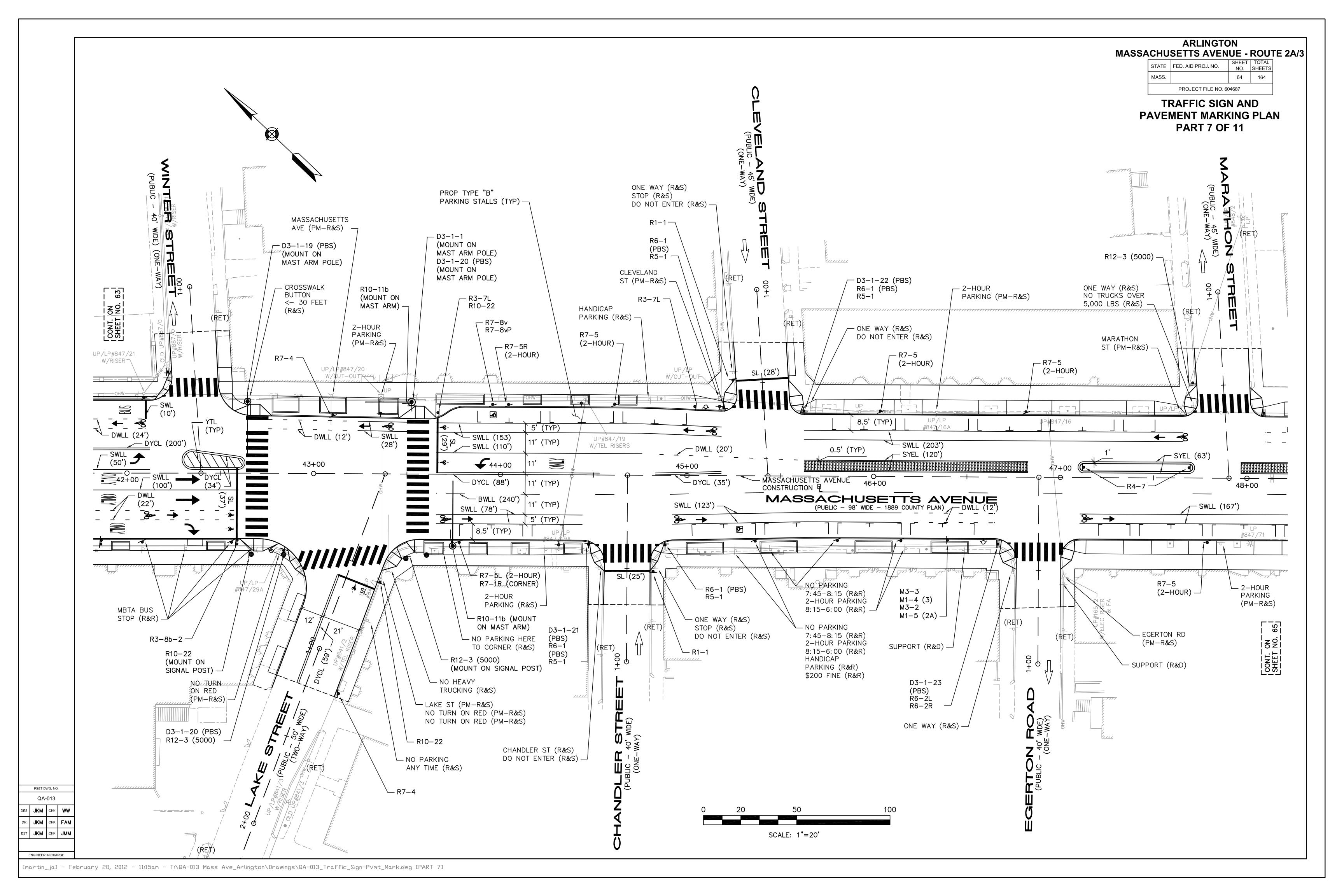


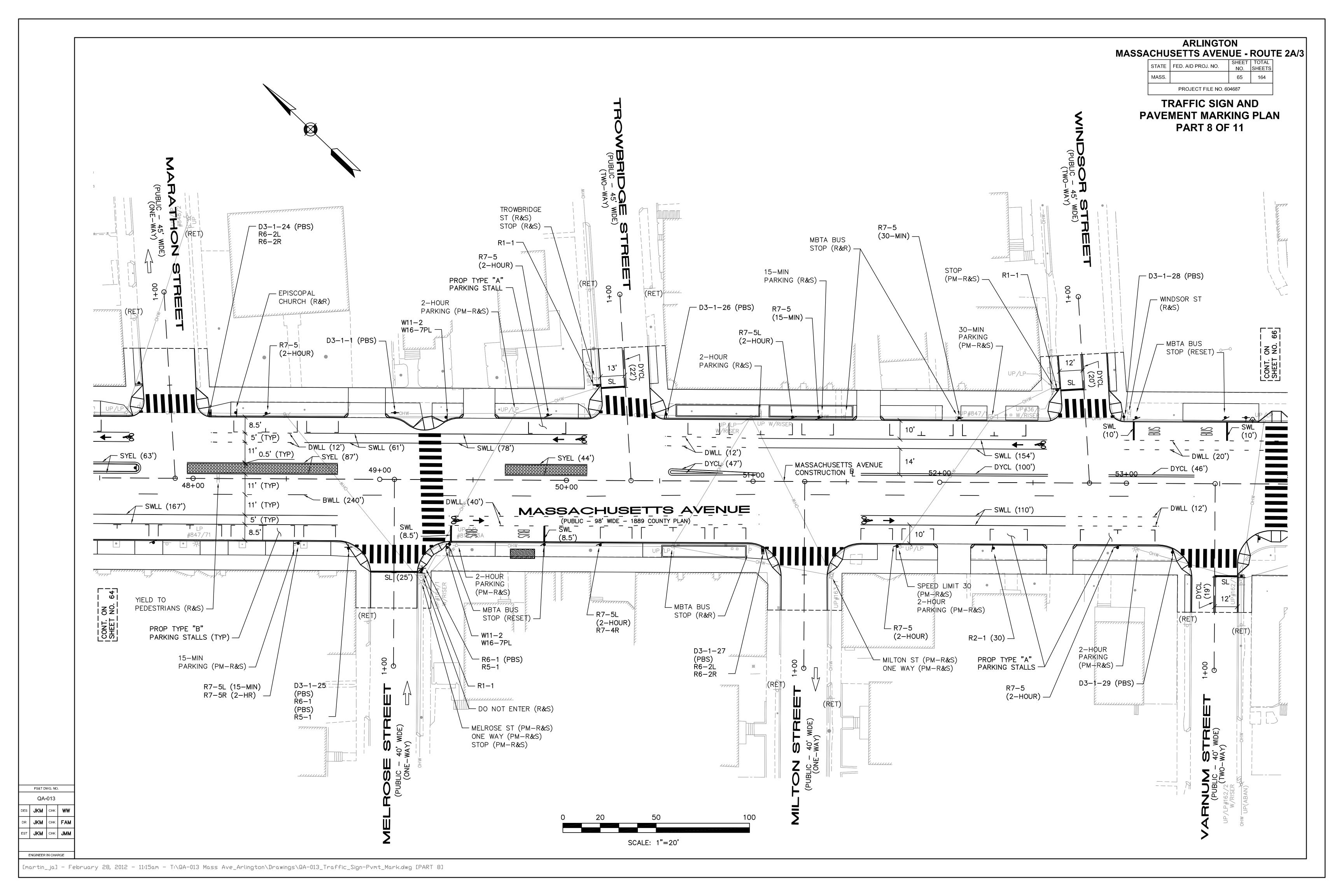


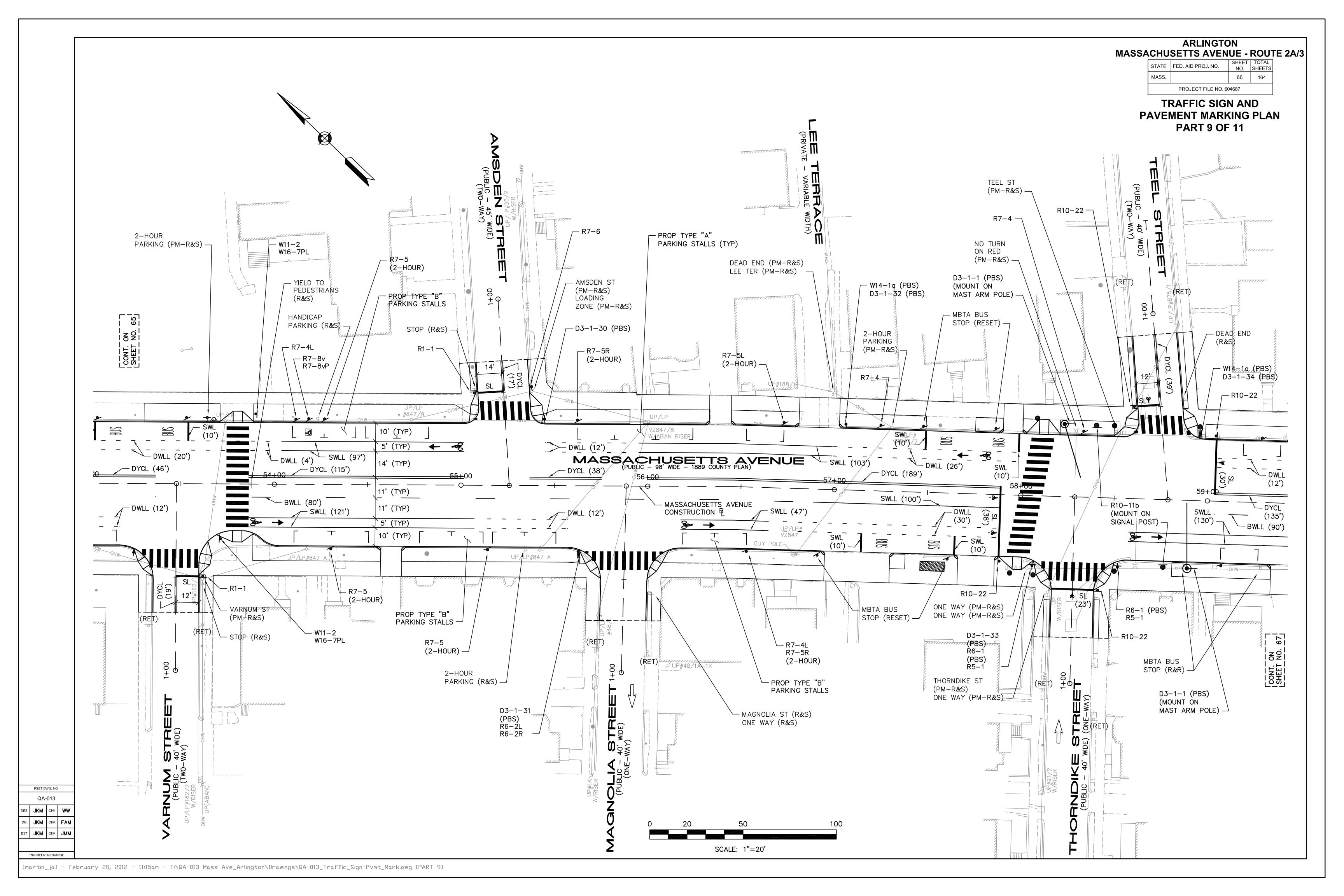


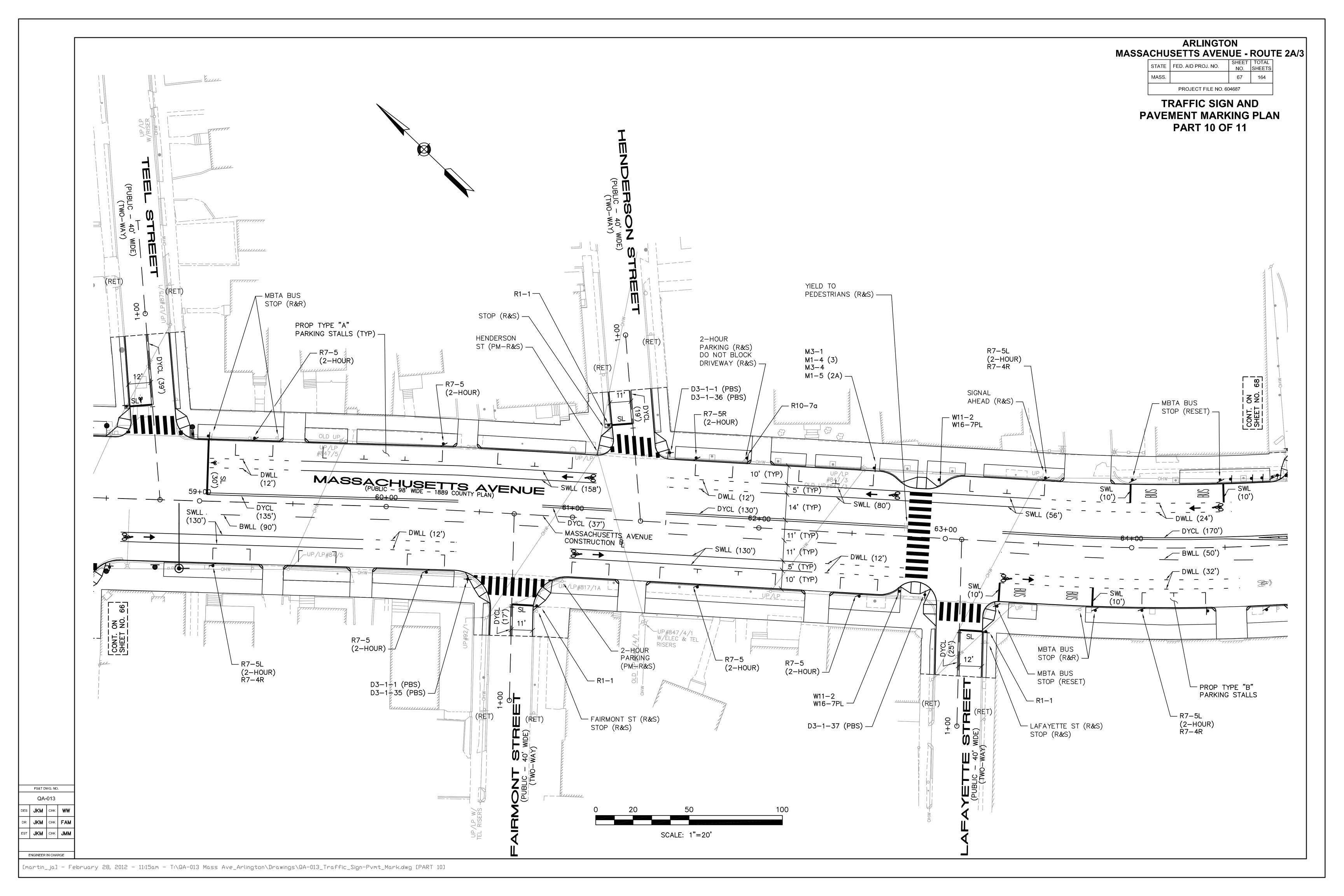


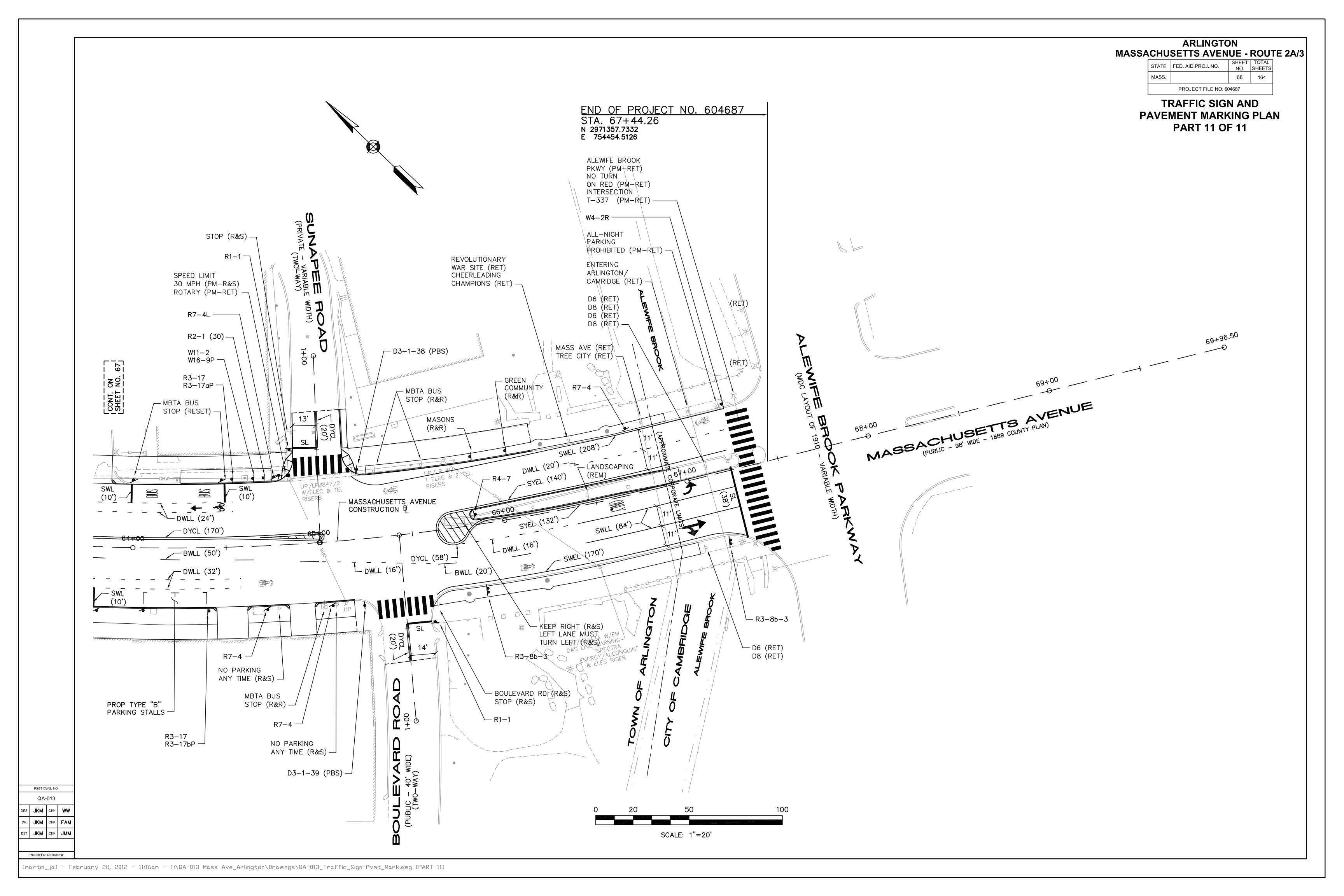












NOTE:
ALL STOP AND YIELD SIGNS PROPOSED IN THIS CONTRACT ARE SUBJECT TO FIELD INVESTIGATION BY THE DISTRICT OFFICE OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION TO JUSTIFY WARRANTS BEFORE INSTALLATION. NUMERICAL LIMITS AND JUSTIFICATION FOR ALL SPEED LIMIT SIGNS WILL BE DETERMINED BY THE SPEED ZONING UNIT OF THE TRAFFIC ENGINEERING SECTION, MASSACHUSETTS DEPARTMENT OF TRANSPORTATION BEFORE FABRICATION AND/OR ERECTION.

NOTES:

1. SUPER HIGH INTENSITY UNMETALIZED MICROPRISMATIC ELEMENT REFLECTIVE SHEETING M9.30.0 TYPE VII, VIII, IX, OR X SHALL BE USED FOR ALL SIGNS.

2. PBS - PRINT BOTH SIDES

ARLINGTON MASSACHUSETTS AVENUE - ROUTE 2A/3

STATE FED. AID PROJ. NO. SHEET TOTAL NO. SHEETS 69

PROJECT FILE NO. 604687

TRAFFIC SIGN SUMMARY SHEET 1 OF 3

IDENTIFI-	SIZE (OF SIGN	TEVT	TEX	T DIME	ENSIONS	NUMBER OF		COLOR		POST SIZE AND	AREA IN	IDENTIFI—	SIZE (OF SIGN	TEVT		TEXT [IMENSI	ONS	NUMBER OF		С	OLOR	P	POST SIZE AND	AREA IN
CATION NUMBER	WIDTH	HEIGHT	TEXT	LETTER HEIGHT	VERTI SPAC	CAL ARROW	SIGNS REQUIRED	BACK- GROUND	LEGEND	BORDER	POST SIZE AND NUMBER REQUIRED	SQUARE FEET	CATION NUMBER	WIDTH	HEIGHT	TEXT	LET. HEIC	TER VE	RTICAL PACING	ARROW	SIGNS REQUIRED	BACK GROU	(– LE	GEND BOR	DER NÜ	POST SIZE AND JMBER REQUIRED	FEET
R1-1	30"	30"	STOP	SEE MUTCD	SE MUT	E SEE MUTCD	21	SEE MUTCD	SEE MUTCD	SEE MUTCD	1-P5 21	110.25	R6-1 (PBS)	36"	12"	ONE WAY	SE MUT	E CD N	SEE IUTCD	SEE MUTCD	18	SEE MUTO	E S	SEE SI UTCD MU	EE M TCD	10UNT 18 WITH R5-1	54.00
R2-1 (30)	24"	30"	SPEED LIMIT 30				8				1-P5 8	40.00	R6-2L	12"	18"	ONE WAY					10				N	1-P5 9 MOUNT 1 WITH D3-1-1	15.00
R3-7L	36"	36"	LEFT LANE MUST TURN LEFT				5				1-P5 4 MOUNT 1 WITH R10-22	45.00	R6-2R	12"	18"	ONE WAY					10					MOUNT 9 WITH R6-2L MOUNT 1 WITH D3-1-1	15.00
R3-7R	36"	36"	RIGHT LANE MUST TURN RIGHT				1				1–P5 1	9.00	R7-1 (ANY TIME)	12"	18"	NO PARKING ANY TIME					6					1–P5 6	9.00
R3-8b-1	60"	30"	ONLY ONLY ONLY ONLY				1				2-P5 1	12.50	R7-1L (ANY TIME)	12"	18"	NO PARKING ANY TIME					1				N R	MOUNT 1 WITH 7-5 (2-HOUR)	1.50
R3-8b-2	48 "	30"	ONLY ONLY				1				2-P5 1	10.00	R7-1R (ANY TIME)	12"	18"	NO PARKING ANY TIME					1					1–P5 1	1.50
R3-8b-3	48 "	30"	ONLY ONLY				2				2–P5 2	20.00	R7-1L (CORNER)	12"	18"	NO PARKING HERE TO CORNER					1					1–P5 1	1.50
R3–17	24"	18"	BIKE LANE				4				1–P5 4	12.00	R7-1R (CORNER)	12"	18"	NO PARKING HERE TO CORNER					3				 	MOUNT 1 WITH R7-8v MOUNT 2 WITH 7-5L (2-HOUR)	4.50
R3-17aP	24" 24"	8" 8"	AHEAD ENDS				2 2				MOUNT 2 WITH R3-17 MOUNT 2 WITH R3-17	2.67	R7-1 (THIS SIDE)	12"	18"	NO PARKING THIS SIDE					2					1–P5 2	3.00
R4-4	30"	36"	BEGIN RIGHT TURN LANE YIELD TO BIKES				2				1-P5 2	15.00	R7-4	12"	18"	NO STANDING ANY TIME					15					1–P5 15	22.50
R4-7	24"	30"	7				8				1-P5 7 MOUNT 1 WITH D3-1-1	40.00	R7-4L	12"	18"	NO STANDING ANY TIME					6				N R7	1-P5 4 MOUNT 2 WITH 7-5R (2-HOUR)	9.00
R5–1	30"	30"	DO NOT ENTER				18				1–P5 18	112.50	R7-4R	12"	18"	NO STANDING ANY TIME	V		V	V	7	•		•	M R7	1-P5 1 MOUNT 6 WITH 7-5L (2-HOUR)	10.50
R5-2	24"	24"			•	•	2	•	•	V	1-P5 2	8.00															
R5-11	24"	24"	NO ACCESS TO LAKE ST	3"D 3"D 3"D 3"D	2.5 2' 2' 2' 2.5	, , ,	1	WHITE	BLACK	BLACK	MOUNT 1 ON SIGNAL POST	4.00															

FS&T DWG. NO. QA-013

[martin_ja] - February 28, 2012 - 11:16am - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic_Sign_Summary.dwg [SHEET 1 WARN-REG-ROUTE]

STATE FED. AID PROJ. NO. SHEET SHEETS PROJECT FILE NO. 604687

TRAFFIC SIGN SUMMARY SHEET 2 OF 3

NOTES:

1. SUPER HIGH INTENSITY UNMETALIZED MICROPRISMATIC ELEMENT REFLECTIVE SHEETING M9.30.0 TYPE VII, VIII, IX, OR X SHALL BE USED FOR ALL SIGNS.

2. PBS - PRINT BOTH SIDES

IDENTIFI—	SIZE O	F SIGN	TCVT	TEX	T DIME	INSIONS	NUMBER OF		COLOR		POST SIZE AND	AREA IN	IDENTIFI—	SIZE C	OF SIGN	TEVT		TEXT	DIMENSI	ONS	NUMBER	2	COL	OR	POST SIZE AND	AREA IN
CATION NUMBER	WIDTH	HEIGHT	TEXT	LETTER HEIGHT	VERTION	CAL ARROW	SIGNS REQUIRED	BACK- GROUND	LEGEND	BORDER	POST SIZE AND NUMBER REQUIRED	SQUARE FEET	CATION NUMBER	WIDTH	HEIGHT	TEXT	LET'	TER V	ERTICAL SPACING	ARROW		BACK- GROUND	LEGE	ND BORDER	POST SIZE AND NUMBER REQUIRED	SQUARE FEET
R7-5 (2-HOUR)	12"	18"	TWO HOUR PARKING	SEE MUTCD	SEE MUTO		44	SEE MUTCD	SEE MUTCD	SEE MUTCD	1-P5 44	231.00	W4-2R	36"	36"		SE MUT		SEE MUTCD	SEE MUTCD	1	SEE MUTCD	SEE MUT	SEE SEE MUTCD	1-P5 1	9.00
R7-5L (2-HOUR)	12"	18"	TWO HOUR PARKING				11				1–P5 11	16.50	W11-2	36"	36"						14				1-P5 14	126.00
R7-5R (2-HOUR)	12"	18"	TWO HOUR PARKING				9				1-P5 9	13.50	W14-1a (PBS)	36"	8"	DEAD END→					2				MOUNT 1 WITH D3-1-32 MOUNT 1 WITH D3-1-34	4.00
R7-5 (30-MIN)	12"	18"	30 MINUTE PARKING				1				1–P5 1	1.50	W16-7PL	24"	12"						12				MOUNT 12 WITH W11-2	24.00
R7-5 (15-MIN)	12"	18"	15 MINUTE PARKING				1				1–P5 1	1.50	W16-9P	24"	12"	AHEAD	•	1	•	•	2	•	*	•	MOUNT 2 WITH W11-2	4.00
R7-5L (15-MIN)	12"	18"	15 MINUTE PARKING				1				MOUNT 1 WITH R7-5R (2-HOUR)	1.50														
R7-6	12"	18"	NO PARKING LOADING ZONE	\	•		1	•	*	•	1–P5 1	1.50	M1-4 (3)	24"	24"	3	SE MUT	E rcd	SEE MUTCD	SEE MUTCD	4	SEE MUTCD	SEE MUT	SEE SEE MUTCD	1–P5 4	16.00
R7-8v	12"	18"	HANDICAPPED PARKING SEED OF THE PARKING SEED O	SEE MASSDOT STDS.	SEE MASSI STD:	SEE SEE MASSDOT S. STDS.	4	SEE MASSDOT STDS.	SEE MASSDOT STDS.	SEE MASSDOT STDS.	1–P5 4	6.00	M1-5 (2A)	24"	24"	2A	SE MASS STE	E SDOT M DS.	SEE ASSDOT STDS.	SEE MASSDOT STDS.	4	SEE MASSDO STDS.	SEE T MASSI STD	SEE SEE MASSDOT S. STDS.	MOUNT 4 WITH M1-4 (3)	16.00
R7-8vP	12"	6"	\$200 FINE	•	•	•	4	V	•	•	MOUNT 4 WITH R7-8v	2.00	M3-1	24"	12"	NORTH	SE MUT	E FCD	SEE MUTCD	SEE MUTCD	2	SEE MUTCD	SEE MUT(SEE SEE MUTCD	MOUNT 2 WITH M1-4 (3)	4.00
R10-7a	24"	30"	DO NOT BLOCK DRIVEWAY	6"C 6"C 4"B	4.5 3.5 2.5 3.5	"	1	WHITE	BLACK	BLACK	1–P5 1	5.00	M3-2	24"	12"	EAST					2				MOUNT 2 WITH M1-4 (3)	4.00
R10-11b	36"	36"	NO TURN ON RED	SEE MUTCD	SEE MUT(E SEE CD MUTCD	9	SEE MUTCD	SEE MUTCD	SEE MUTCD	MOUNT 7 ON MAST ARM MOUNT 2 ON SIGNAL POST	81.00	M3-3	24"	12"	SOUTH					2				MOUNT 2 WITH M1-4 (3)	4.00
R10-22	18"	24"	TO REQUEST GREEN WAIT ON	SEE MASSDOT STDS.	SEE MASSI STD	SEE DOT MASSDOT S. STDS.	15	SEE MASSDOT STDS.	SEE MASSDOT STDS.	SEE MASSDOT STDS.	1-P5 11 MNT 3 ON SP MNT 1 ON MAST ARM POLE	45.00	M3-4	24"	12"	WEST	•	,	V	V	2	•	•	•	MOUNT 2 WITH M1-4 (3)	4.00
R12-3 (5000)	24"	36"	NO TRUCKS OVER 5000 LBS EMPTY WT	SEE MUTCD	SEE MUT	E SEE CD MUTCD	4	SEE MUTCD	SEE MUTCD	SEE MUTCD	1-P5 2 MNT 1 W/ R6-2L MNT 1 ON SIGNAL POST	24.00														

FS&T DWG. NO. QA-013

[martin_ja] - February 28, 2012 - 11:16am - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic_Sign_Summary.dwg [SHEET 2 WARN-REG-ROUTE]

STATE FED. AID PROJ. NO. SHEET TOTAL NO. SHEETS PROJECT FILE NO. 604687

TRAFFIC SIGN SUMMARY SHEET 3 OF 3

NOTES: 1. SUPER HIGH INTENSITY UNMETALIZED MICROPRISMATIC ELEMENT REFLECTIVE SHEETING M9.30.0 TYPE VII, VIII, IX, OR X SHALL BE USED FOR ALL SIGNS.

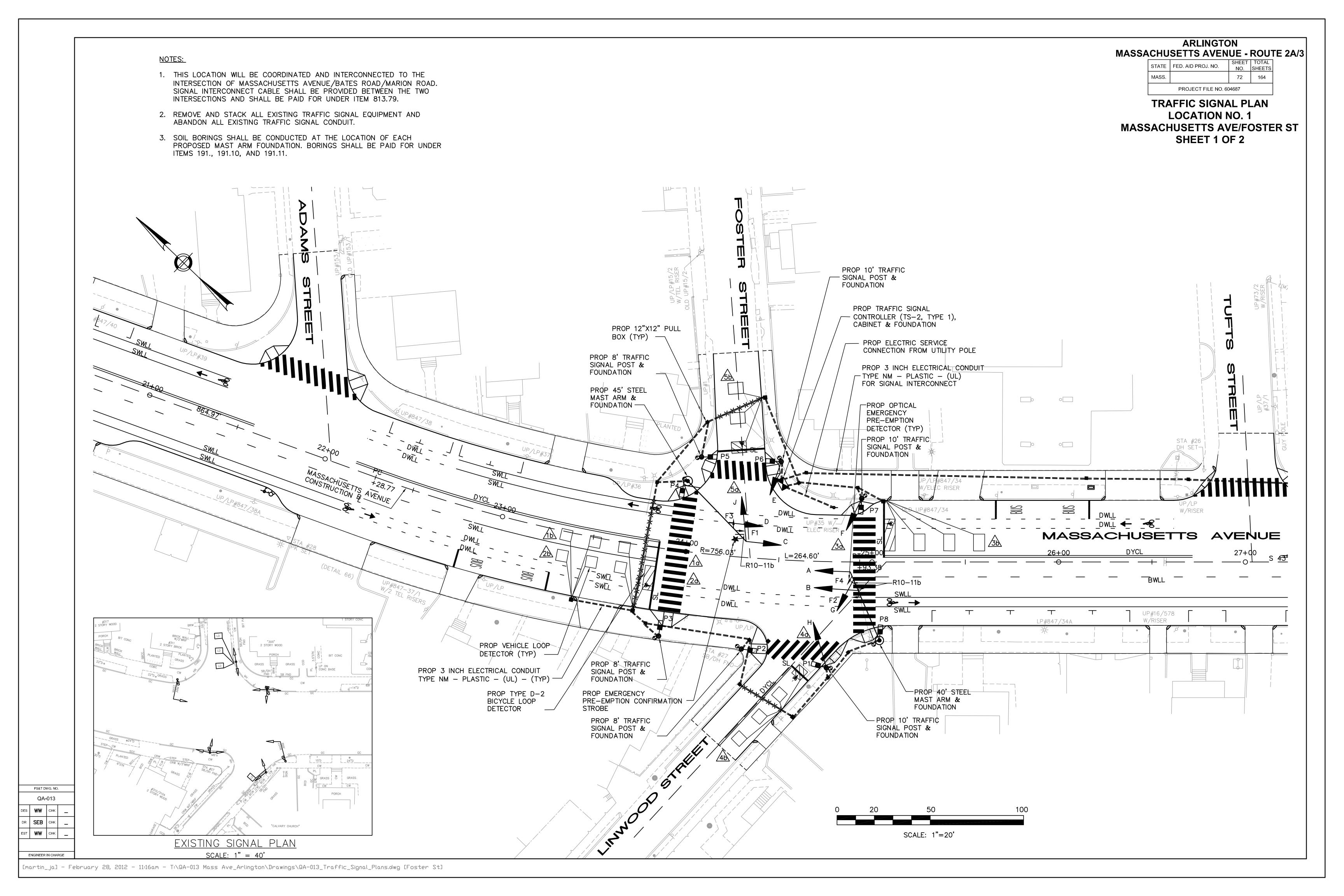
2. PBS - PRINT BOTH SIDES

IDENTIFI-	SIZE C	F SIGN	TEVT	TEX	CT DIMENSI	ONS	NUMBER OF		COLOR		POST SIZE AND	AREA IN
CATION NUMBER	WIDTH	HEIGHT	TEXT	LETTER HEIGHT	VERTICAL SPACING	ARROW	SIGNS REQUIRED	BACK- GROUND	LEGEND	BORDER	NUMBER REQUIRED	SQUARE FEET
D3-1-1 (PBS)	36"	9"	Mass. Ave	SEE MUTCD	SEE MUTCD		13	SEE MUTCD	SEE MUTCD	SEE MUTCD	1-P5 6 MOUNT 7 ON MAST ARM POLE	29.25
D3-1-2 (PBS)	33"	9"	Pond Ln				1				1-P5 1	2.06
D3-1-3 (PBS)	42"	9"	Palmer St				1				MOUNT 1 WITH D3-1-1	2.63
D3-1-4 (PBS)	45"	9"	Wyman Ter				2				1-P5 2	5.63
D3-1-5 (PBS)	42"	9"	Wyman St				1				MOUNT 1 WITH R6-2L	2.63
D3-1-6 (PBS)	33"	9"	Allen St				1				MOUNT 1 WITH R5-1	2.06
D3-1-7 (PBS)	39"	9"	Adams St				1				MOUNT 1 WITH R6-2L	2.44
D3-1-8 (PBS)	39"	9"	Foster St				1				MOUNT 1 WITH D3-1-1	2.44
D3-1-9 (PBS)	45"	9"	Linwood St				1				1-P5 1	2.81
D3-1-10 (PBS)	36"	9"	Tufts St				1				MOUNT 1 WITH R6-2L	2.25
D3-1-11 (PBS)	39"	9"	Marion Rd				1				MOUNT 1 WITH R10-22	2.44
D3-1-12 (PBS)	36"	9"	Bates Rd				1				MOUNT 1 WITH R5-2	2.25
D3-1-13 (PBS)	48"	9"	Elmhurst Rd				1				1-P5 1	3.00
D3-1-14 (PBS)	39"	9"	Harlow St				1				MOUNT 1 WITH R6-2L	2.44
D3-1-15 (PBS)	42"	9"	Everett St				1				MOUNT 1 WITH R5-1	2.63
D3-1-16 (PBS)	36"	9"	Orvis Rd				1				MOUNT 1 WITH D3-1-1	2.25
D3-1-17 (PBS)	42"	9"	Grafton St				1				MOUNT 1 WITH D3-1-1	2.63
D3-1-18 (PBS)	39"	9"	Oxford St				1				MOUNT 1 WITH R5-1	2.44
D3-1-19 (PBS)	39"	9"	Winter St				1				MOUNT 1 ON MAST ARM POLE	2.44
03-1-20 (PBS)	33"	9"	C Lake St	T	\		2	•	+	•	MOUNT 1 W/R12-3 (5000)	4.13

ENTIFI-	SIZE 0	F SIGN	TEXT	TEX	T DIMENSIO	NS 	NUMBER OF		COLOR		POST SIZE AND	AREA IN
CATION UMBER	WIDTH	HEIGHT	ILAI	LETTER HEIGHT	VERTICAL SPACING	ARROW	SIGNS REQUIRED	BACK- GROUND	LEGEND	BORDER	NUMBER REQUIRED	FEET
3–1–21 (PBS)	45"	9"	Chandler St	SEE MUTCD	SEE MUTCD		1	SEE MUTCD	SEE MUTCD	SEE MUTCD	MOUNT 1 WITH R5-1	2.81
5-1-22 (PBS)	48"	9"	Cleveland St				1				MOUNT 1 WITH R5-1	3.00
5-1-23 (PBS)	42"	9"	Egerton Rd				1				MOUNT 1 WITH R6-2L	2.63
5-1-24 (PBS)	48"	9"	Marathon St				1				MOUNT 1 WITH R6-2L	3.00
5-1-25 (PBS)	42"	9"	Melrose St				1				MOUNT 1 WITH R5-1	2.63
5-1-26 (PBS)	54"	9"	Trowbridge St				1				1-P5 1	3.38
5–1–27 (PBS)	36"	9"	Milton St				1				MOUNT 1 WITH R6-2L	2.25
5–1–28 (PBS)	42"	9"	Windsor St				1				1-P5 1	2.63
7–1–29 (PBS)	42"	9"	Varnum St				1				1-P5 1	2.63
-1-30 PBS)	42"	9"	Amsden St				1				1-P5 1	2.63
-1-31 PBS)	45"	9"	Magnolia St				1				MOUNT 1 WITH R6-2L	2.81
-1-32 PBS)	33"	9"	Lee Ter				1				1-P5 1	2.06
-1-33 PBS)	48"	9"	Thorndike St				1				MOUNT 1 WITH R5-1	3.00
-1-34 PBS)	30"	9"	Teel St				1				1-P5 1	1.88
-1-35 PBS)	48"	9"	Fairmont St				1				MOUNT 1 WITH D3-1-1	3.00
-1-36 PBS)	51"	9"	Henderson St				1				MOUNT 1 WITH D3-1-1	3.19
-1-37 PBS)	48"	9"	Cafayette St				1				1-P5 1	3.00
-1-38 PBS)	45"	9"	Sunapee Rd				1				1-P5 1	2.81
-1-39 PBS)	51"	9"	Boulevard Rd				1				1-P5 1	3.19
5-1-P	36"	9"	PRIVATE WAY	+	•		2	V	•		MNT 1 W/D3-1-32 MNT 1 W/D3-1-38	4.50

FS&T DWG. NO. QA-013

[martin_ja] - February 28, 2012 - 11:16am - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic_Sign_Summary.dwg [SHEET 3 STREET NAME]



EMERGENCY PRE-EMPTION SEQUENCE AND TIMING FOR FULLY-ACTUATED TRAFFIC SIGNAL CONTROL NOT USED USED USED USED ***** øF4 DIR HOUSING øЗ ø4 ø5 ø6 ø7 STREET $R \mid R \mid R$ Ĝ Y R $R \mid R \mid R$ MASS AVE RRRR $R \mid R \mid R$ G | Y | R G MASS AVE EB B GYR $R \mid R \mid R$ $R \mid R \mid R$ WB C MASS AVE Ĝ | Y | R $R \mid R \mid R$ $R \mid R \mid R$ RIRIRIRIRIR WB D Y R $R \mid R \mid$ MASS AVE $R \mid R \mid R$ $R \mid R \mid R$ G | Y | R LINWOOD ST NB E,F,G $R \mid R \mid R$ $R \mid R \mid R$ $R \mid R \mid R$ SB H,J FOSTER ST DW | DW | DW DW | DW | DW DW DW DW P1-P8 PEDESTRIAN MINIMUM GREEN EXTENSION INTERVAL 72 72 11 11 MAXIMUM I (COORDINATED) MAXIMUM II (FREE) 4 | 3 4 | 3 4 | 3 4 | 3 4 | 3 4 | 3 CLEARANCE INTERVAL "WALK" INTERVAL 13 3 PED CLEARANCE INTERVAL DETECTOR MEMORY NON-LOCK NON-LOCK NON-LOCK NON-LOCK LOCK(PED) RECALL SWITCH OFF SOFT OFF PROGRAM/COORDINATION

ARLINGTON MASSACHUSETTS AVENUE - ROUTE 2A/3

STATE FED. AID PROJ. NO. SHEET NO. SHEETS

MASS. 73 164

PROJECT FILE NO. 604687

TRAFFIC SIGNAL PLAN
LOCATION NO. 1
MASSACHUSETTS AVE/FOSTER ST
SHEET 2 OF 2

TECHNICAL NOTES

CYCLE

NO. LENGTH

120

80

- 1. ANY PHASE NOT CALLED WILL BE SKIPPED. SIGNAL INDICATION WILL NOT CHANGE IF THE ASSIGNED RIGHT OF WAY DOES NOT CHANGE DURING THE NEXT PHASE CALLED.
- 2. THE RIGHT-OF-WAY MAY BE ASSIGNED TO ANY PHASE OR ANY COMBINATION OF NON-CONFLICTING PHASES. IF CALLS EXIST ON ALL PHASES, THE RIGHT-OF-WAY SHALL BE ASSIGNED IN ACCORDANCE WITH THE PREFERENTIAL PHASING SEQUENCE.

72 | 4 | 3

35 | 4 | 3

11 4 3

8 4 3

- 3. OFFSET REFERENCED TO THE BEGINNING OF GREEN, PHASES 2 & 6
- 4. Ø2 + Ø6 DETECTION "CALL NON-ACTUATED" DURING COORDINATION
- 5. FLASHING OPERATION PER M.U.T.C.D. SECTION 4D.12

OFFSET

% / SEC

96 / 115

99 / 79

- 6. PLAN FORCE OFF/FLOATING FORCE SHALL BE IN EFFECT DURING COORDINATION.
- 7. CYCLE 1 = 6 AM 10 AM M-F CYCLE 2 = 3 PM - 7 PM M-F FREE OPERATION = ALL OTHER TIMES

EMERGENCY VEHICLE PRE-EMPTION PHASING AND PRIORITY NOTES:

72 | 4 | 3

35 | 4 | 3

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.

11 | 4 | 3 | 7 | 13 | 3

8 | 4 | 3 | 7 | 13 | 3

- 2. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR F1 (OR F2, F3, F4) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE F1 (OR F2, F3, F4) GREEN UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN SERVICE EMERGENCY VEHICLE PRE-EMPTION PHASE F2 (OR F1) IF NECESSARY, THEN TIME PHASE PRE-EMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION. EMERGENCY VEHICLE PRE-EMPTION PHASE F3 AND F4 SHALL BE SIMILARLY SERVED.
- 3. MINIMUM GREEN, NORMAL VEHICLE CLEARANCE, SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
- 4. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.

	MA IOD ITEM LIGT
	MAJOR ITEM LIST
QTY.	
1	TRAFFIC SIGNAL CONTROLLER (TS-2, TYPE 1) TYPE 8DW W/ 8DW CABINET & FOUNDATION
1	45' ORNAMENTAL MAST ARM (STEEL) WITH R10-11b SIGN, INCLUDE BASE AND FOUNDATION
1	40' ORNAMENTAL MAST ARM (STEEL) WITH 2 R10-11b SIGNS, INCLUDE BASE AND FOUNDATION
3	10' ORNAMENTAL TRAFFIC SIGNAL POST, BASE AND FOUNDATION
3	8' ORNAMENTAL TRAFFIC SIGNAL POST, BASE AND FOUNDATION
7	1-WAY, 3 SECTION SIGNAL HEAD, 12" L.E.D. LENS (W/ VISORS)
1	2-WAY, 3 SECTION SIGNAL HEAD, 12" L.E.D. LENS (W/ VISORS)
9	±5" LOUVERED BACKPLATES
19	12"x12" PULL BOX
19	WIRE LOOP DETECTORS
5	LOOP DETECTORS AMPLIFIERS (DUAL CHANNEL)
80	PEDESTRIAN SIGNAL HEAD (L.E.D.), WITH COUNTDOWN DISPLAY
8	PEDESTRIAN PUSH BUTTON ASSEMBLY (INCLUDING SIGN AND SADDLE)
1	PRE-EMPTION PHASE SELECTOR
1	EMERGENCY PRE-EMPTION STROBE LIGHT
4	EMERGENCY PRE-EMPTION RECEIVERS
1	AUDIBLE PEDESTRIAN CROSSING ASSEMBLY
1	SERVICE CONNECTION (ELECTRIC)

PLUS ALL NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIALS AND EQUIPMENT TO COMPLETE THE INSTALLATION.

SIGNAL IDENTIFICATION

DUAL DISPLAY
ONE SECTION
(COUNTDOWN)

B,C,E
F,G,H,J
P1,P2,P3,P4
P5,P6,P7,P8

- 1. ALL TRAFFIC SIGNAL HEADS SHALL BE EQUIPPED WITH ±5" LOUVERED BACKPLATES.
- 2. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH L.E.D. MODULES WITH 12" LENSES.

			LOOP	DETECTOR O	PERATION						
DETECTOR NO.	NO. OF SEGMENTS	LOOP SIZE (FT)	AMPLIFIER NO.	CHANNEL NO.	SPLICE PATTERN*	NO. OF TURNS	ø CALLED	ø EXTENSION	MODE: A=PULSE B=PRES. C=CALLING	DELAY (SECONDS)	EXTENSION (SECONDS)
<u>/1a</u>	1	6' x 6'	1	1	S	3	6	_	С	0	0
<u>/b</u>	3	6' x 6'	1	2	Р	3	6	6	В	0	0
20	1	13' x 6'	2	1	BL	4	6	_	С	0	0
<u>Źb</u>	3	6' x 6'	2	2	Р	3	6	6	В	0	0
3	1	17' x 6'	3	1	BL	4	2	_	С	0	0
<u>3b</u>	3	9' x 6'	3	2	Р	3	2	2	В	0	0
40	1	6' x 6'	4	1	BL	4	4	_	С	0	0
<u>4</u> b	3	6' x 6'	4	2	Р	3	4	4	В	0	0
<u></u> 5à	1	8' x 6'	5	1	BL	4	8	_	С	0	0
<u>S</u> b	2	8' x 6'	5	2	Р	3	8	8	В	0	0

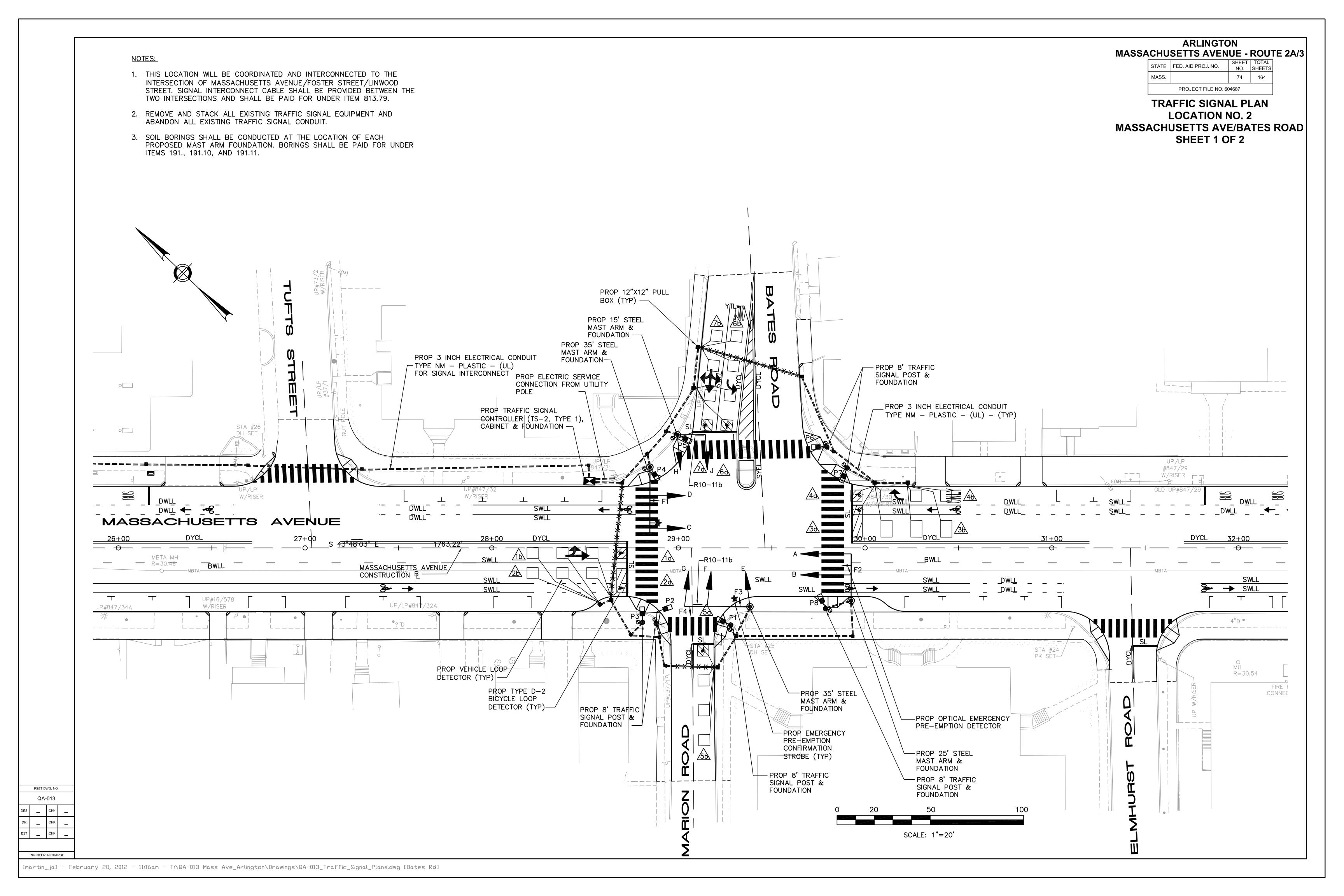
* S=SERIES, P=SERIES/PARALLEL, BL=BICYCLE LOOPS

LOOP DETECTOR NOTES:

1. SEE LOOP DETECTOR DETAIL SHEETS FOR SPLICE PATTERN AND OTHER INFORMATION.

FS&T DWG. NO.

QA-013



						SE	QUEN	CE AND TIMIN	G FOR	FUL	LY-AC	TUATED	TRAFF	FIC SIG	SNAL (CONTRO	DL														EM	IERGE	NCY	PRE-E	EMPTI	ON			
	T Ø			NOT USED				NOT USED			*	1	N(US	OT SED	1	⋠			NO1 USE			,	OL			▼ CMILLON III	OPERATION											ĸ	
STF	EET	DIR H	HOUSING	ø1		ø2	•	ø3			ø4		Ø	5		ø6			ø7			ø8			ø9				øF1			øF2			øF3			øF4	
MASS AV	E	EB A	, ,B		R	R	R			R	R	R			G	Y	R				R	R	R	R	R	R i	(Y)	R	R	R	G	Υ	R	R	R	R	R	R	R
MASS AV	E	WB C	;		G	Y	R			R	R	R			R	R	R				R	R	R	R	R			G	Υ	R	R	R	R	R	R	R	R	R	R
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TECHNICAL NOTES

120

- 1. ANY PHASE NOT CALLED WILL BE SKIPPED. SIGNAL INDICATION WILL NOT CHANGE IF THE ASSIGNED RIGHT OF WAY DOES NOT CHANGE DURING THE NEXT PHASE CALLED.
- 2. THE RIGHT-OF-WAY MAY BE ASSIGNED TO ANY PHASE OR ANY COMBINATION OF NON-CONFLICTING PHASES. IF CALLS EXIST ON ALL PHASES, THE RIGHT-OF-WAY SHALL BE ASSIGNED IN ACCORDANCE WITH THE PREFERENTIAL PHASING SEQUENCE.
- 3. OFFSET REFERENCED TO THE BEGINNING OF GREEN, PHASES 2 & 6
- 4. Ø2 + Ø6 DETECTION "CALL NON-ACTUATED" DURING COORDINATION
- 5. FLASHING OPERATION PER M.U.T.C.D. SECTION 4D.12

0 / 0

0 / 0

- 6. PLAN FORCE OFF/FLOATING FORCE SHALL BE IN EFFECT DURING COORDINATION.
- 7. CYCLE 1 = 6 AM 10 AM M FCYCLE 2 = 3 PM - 7 PM M-FFREE OPERATION = ALL OTHER TIMES

EMERGENCY VEHICLE PRE-EMPTION PHASING AND PRIORITY NOTES:

| 58 | 4 | 3

24 4 3

4 3.5 3.5

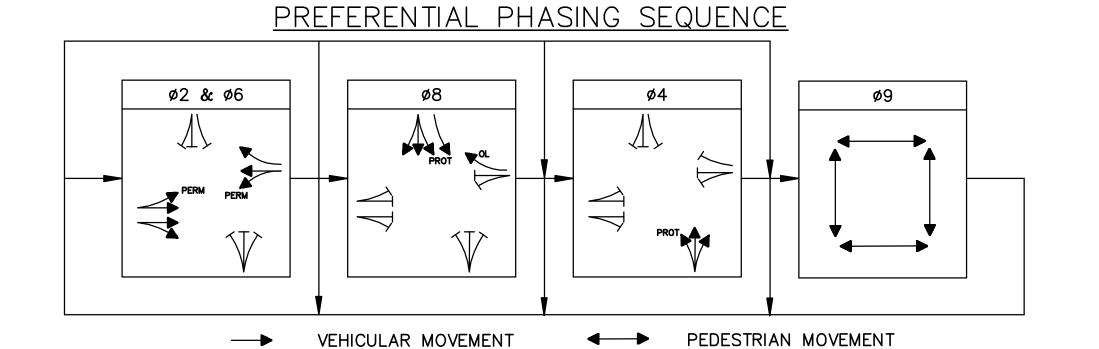
4 | 3.5 | 3.5

- 1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
- 2. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR F1 (OR F2, F3, F4) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE F1 (OR F2, F3, F4) GREEN UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN SERVICE EMERGENCY VEHICLE PRE-EMPTION PHASE F2 (OR F1) IF NECESSARY, THEN TIME PHASE PRE-EMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION. EMERGENCY VEHICLE PRE-EMPTION PHASE F3 AND F4 SHALL BE SIMILARLY SERVED.
- 3. MINIMUM GREEN, NORMAL VEHICLE CLEARANCE, SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
- 4. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.

SIGNAL IDENTIFICATION

14 4 3 7 13 3

8 | 4 | 3 | 7 | 13 | 3



58 4 3

24 4 3

DUAL DISPLAY ONE SECTION (COUNTDOWN) A,B,C, E,F P1,P2,P3,P4

P5,P6,P7,P8

- 1. ALL TRAFFIC SIGNAL HEADS SHALL BE EQUIPPED WITH ±5" LOUVERED BACKPLATES.
- 2. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH L.E.D. MODULES WITH 12" LENSES.

ARLINGTON

MASSACHUSETTS AVENUE - ROUTE 2A/3 STATE FED. AID PROJ. NO. SHEET SHEETS

PROJECT FILE NO. 604687

TRAFFIC SIGNAL PLAN LOCATION NO. 2 MASSACHUSETTS AVE/BATES ROAD SHEET 2 OF 2

	MAJOR ITEM LIST
QTY.	ITEM
1	TRAFFIC SIGNAL CONTROLLER (TS-2, TYPE 1) TYPE 8DW W/ 8DW CABINET, FOUNDATION & PAD
1	TRAFFIC SIGNAL MASTER CONTROLLER
1	15' ORNAMENTAL MAST ARM (STEEL) WITH R10-11b SIGN, INCLUDE BASE AND FOUNDATION
1	25' ORNAMENTAL MAST ARM (STEEL), INCLUDE BASE AND FOUNDATION
2	35' ORNAMENTAL MAST ARM (STEEL) WITH R10-11b SIGN, INCLUDE BASE AND FOUNDATION
6	8' ORNAMENTAL TRAFFIC SIGNAL POST, BASE AND FOUNDATION
7	1-WAY, 3 SECTION SIGNAL HEAD, 12" L.E.D. LENS (W/ VISORS)
1	1-WAY, 4 SECTION SIGNAL HEAD, 12" L.E.D. LENS (W/ VISORS)
1	1-WAY, 4 SECTION SIGNAL HEAD, 12" L.E.D. LENS (W/VISORS & BI-MODAL ARROW)
9	±5" LOUVERED BACKPLATES
17	12"x12" PULL BOX
28	WIRE LOOP DETECTORS
7	LOOP DETECTORS AMPLIFIERS (DUAL CHANNEL)
8	PEDESTRIAN SIGNAL HEAD (L.E.D.), WITH COUNTDOWN DISPLAY
8	PEDESTRIAN PUSH BUTTON ASSEMBLY (INCLUDING SIGN AND SADDLE)
1	AUDIBLE PEDESTRIAN CROSSING ASSEMBLY
1	PRE-EMPTION PHASE SELECTOR
2	EMERGENCY PRE-EMPTION STROBE LIGHT
4	EMERGENCY PRE-EMPTION RECEIVERS
1	SERVICE CONNECTION (ELECTRIC)

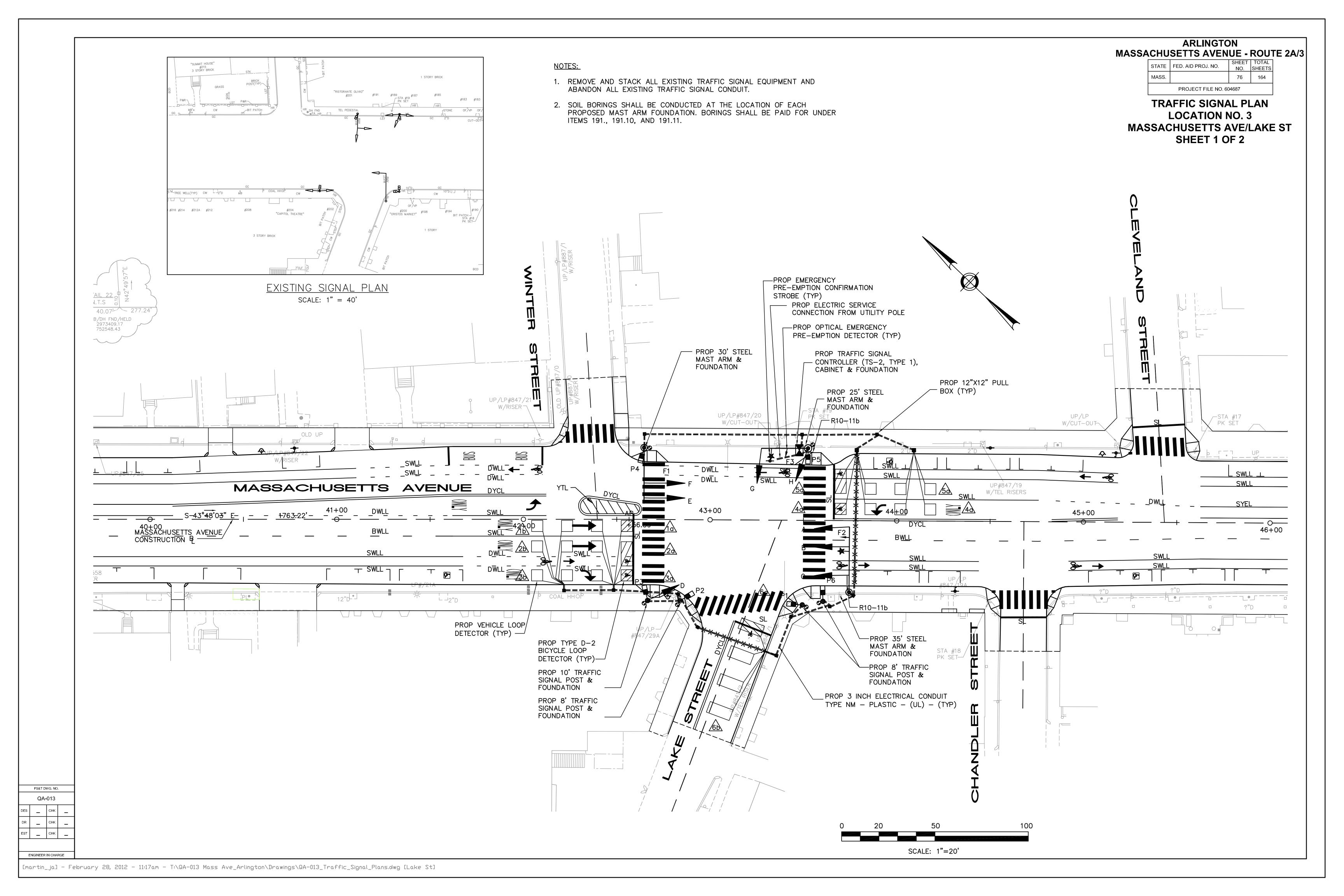
PLUS ALL NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIALS AND EQUIPMENT TO COMPLETE THE INSTALLATION.

			LOOP	DETECTOR O	PERATION						
DETECTOR NO.	NO. OF SEGMENTS	LOOP SIZE (FT)	AMPLIFIER NO.	CHANNEL NO.	SPLICE PATTERN*	NO. OF TURNS	ø CALLED	ø EXTENSION	MODE: A=PULSE B=PRES. C=CALLING	DELAY (SECONDS)	EXTENSIO (SECONDS
<u>/a</u>	1	6' x 6'	1	1	BL	4	6	_	С	0	0
<u>/b</u>	3	6' x 6'	1	2	Р	3	6	6	В	0	0
20	1	13' x 6'	2	1	BL	4	6	_	С	0	0
Źb	3	6' x 6'	2	2	Р	3	6	6	В	0	0
30	1	17' x 6'	3	1	BL	4	2	_	С	0	0
<u>3b</u>	3	9' x 6'	3	2	Р	3	2	2	В	0	0
4	1	6' x 6'	4	1	BL	4	2	_	С	0	0
<u>4</u> b	3	6' x 6'	4	2	Р	3	2	2	В	0	0
<u>~</u>	1	6' x 6'	5	1	BL	4	4	_	С	0	0
Ø\$	3	6' x 6'	5	2	Р	3	4	4	В	0	0
<u></u>	1	6' x 6'	6	1	BL	4	8	_	С	0	0
6b	3	6' x 6'	6	2	Р	3	8	8	В	0	0
<u> </u>	1	6' x 6'	7	1	BL	4	8	_	С	0	0
<u>∕</u> h	3	6' x 6'	7	2	Р	3	8	8	В	0	0

- * S=SERIES, P=SERIES/PARALLEL, BL=BICYCLE LOOPS LOOP DETECTOR NOTES:
- 1. SEE LOOP DETECTOR DETAIL SHEETS FOR SPLICE PATTERN AND OTHER INFORMATION.

ENGINEER IN CHARGE

FS&T DWG. NO.



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.		77	164
	PROJECT FILE NO. 60)4687	

TRAFFIC SIGNAL PLAN
LOCATION NO. 3
MASSACHUSETTS AVE/LAKE ST
SHEET 2 OF 2

						SEQ	UENCE	AND TIMING F	OR FUL	LY—A	CTUATI	ED TF	RAFFIC	SIGN	AL CC	NTROI	-				ı						EMER	GENC'	Y PRE	E-EMP	TION		
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MASS	AVE	EB	A, B		R	R	R		R	R	R	R	R	G	Ĝ	Υ	R				R	R	R	(Y)	R	R	R	Ĝ	Υ	R	R	R	R
MASS	AVE	EB	С		R	R	R		R	R	R	R	R	R	G	Υ	R				R	R	R	(Y)	R	R	R	G	Υ	R	R	R	R
MASS	AVE	WB	D,E		G	Υ	R		R	R	R	<g 0<="" td=""><td><y g<="" td=""><td>G</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td></td><td>R</td><td>R</td><td>R</td><td>(Y)</td><td>G</td><td>Υ</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td></y></td></g>	<y g<="" td=""><td>G</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td></td><td>R</td><td>R</td><td>R</td><td>(Y)</td><td>G</td><td>Υ</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td></y>	G	R	R	R				R	R	R	(Y)	G	Υ	R	R	R	R	R	R	R
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LAKE S	ST	NB	Н		R	R	R		G	Υ	R	R	R	R	R	R	R				R	R	R	(R)	R	R	R	R	R	R	G	Y	R
PEDES'	TRIAN		P1-P6		DW	DW	DW		DW	DW	DW	DW	DW	DW	DW	DW	DW				W	FDW	DW	OUT	DW	DW	DW	DW	DW	DW	DW	DW	DW
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	PED CLEA	RANCE	INTERVAL																			13	3)EN									
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	RECALL SI	WITCH				SOFT				OFF			OFF		_	SOFT		_				OFF		_ E E									

TECHNICAL NOTES

- 1. ANY PHASE NOT CALLED WILL BE SKIPPED. SIGNAL INDICATION WILL NOT CHANGE IF THE ASSIGNED RIGHT OF WAY DOES NOT CHANGE DURING THE NEXT PHASE CALLED.
- 2. THE RIGHT-OF-WAY MAY BE ASSIGNED TO ANY PHASE OR ANY COMBINATION OF NON-CONFLICTING PHASES. IF CALLS EXIST ON ALL PHASES, THE RIGHT-OF-WAY SHALL BE ASSIGNED IN ACCORDANCE WITH THE PREFERENTIAL PHASING SEQUENCE.
- 3. FLASHING OPERATION PER M.U.T.C.D. SECTION 4D.12
- 4. MAX I = NORMAL OPERATION MAX II = MON-FRI, 3PM - 7PM

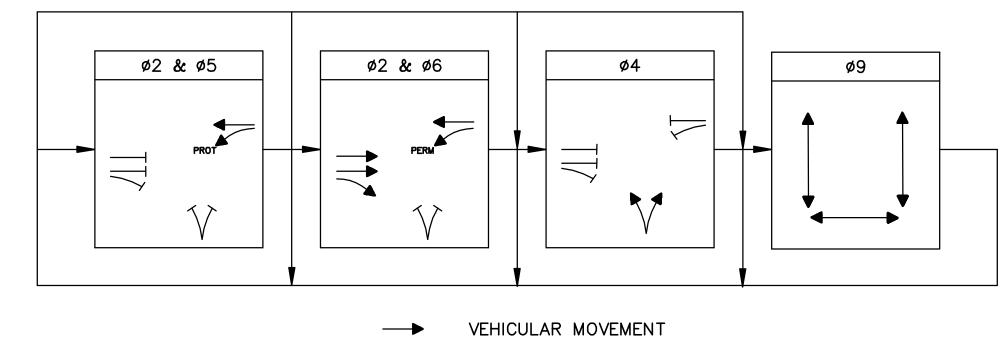
EMERGENCY VEHICLE PRE-EMPTION PHASING AND PRIORITY NOTES:

- 1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
- 2. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR F1 (OR F2, F3) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE F1 (OR F2, F3) GREEN UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN SERVICE EMERGENCY VEHICLE PRE-EMPTION PHASE F2 (OR F1) IF NECESSARY, THEN TIME PHASE PRE-EMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION. EMERGENCY VEHICLE PRE-EMPTION PHASE F3 SHALL BE SIMILARLY SERVED.
- 3. MINIMUM GREEN, NORMAL VEHICLE CLEARANCE, SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
- 4. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.

MAJOR ITEM LIST
ITEM
TRAFFIC SIGNAL CONTROLLER (TS-2, TYPE 1) TYPE 8DW W/ 8DW CABINET & FOUNDATION
25' ORNAMENTAL MAST ARM (STEEL), INCLUDE BASE AND FOUNDATION
30' ORNAMENTAL MAST ARM (STEEL) WITH R10-11b SIGN, INCLUDE BASE AND FOUNDATION
35' ORNAMENTAL MAST ARM (STEEL) WITH R10-11b SIGN, INCLUDE BASE AND FOUNDATION
10' ORNAMENTAL TRAFFIC SIGNAL POST, BASE AND FOUNDATION
8' ORNAMENTAL TRAFFIC SIGNAL POST, BASE AND FOUNDATION
1-WAY, 3 SECTION SIGNAL HEAD, 12" L.E.D. LENS (W/ VISORS)
1-WAY, 4 SECTION SIGNAL HEAD, 12" L.E.D. LENS (W/ VISORS)
1-WAY, 4 SECTION SIGNAL HEAD, 12" L.E.D. LENS (W/VISORS & BI-MODAL ARROW)
±5" LOUVERED BACKPLATES
12"x12" PULL BOX
WIRE LOOP DETECTORS
LOOP DETECTORS AMPLIFIERS (DUAL CHANNEL)
PEDESTRIAN SIGNAL HEADS (L.E.D.), WITH COUNTDOWN DISPLAY
PEDESTRIAN PUSH BUTTON ASSEMBLY (INCLUDING SIGN AND SADDLE)
AUDIBLE PEDESTRIAN CROSSING ASSEMBLY
PRE-EMPTION PHASE SELECTOR
EMERGENCY PRE-EMPTION STROBE LIGHT
EMERGENCY PRE-EMPTION RECEIVERS
SERVICE CONNECTION (ELECTRIC)

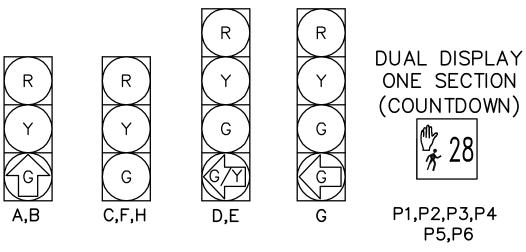
PLUS ALL NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIALS AND EQUIPMENT TO COMPLETE THE INSTALLATION.

PREFERENTIAL PHASING SEQUENCE



PEDESTRIAN MOVEMENT

SIGNAL IDENTIFICATION



- 1. ALL TRAFFIC SIGNAL HEADS SHALL BE EQUIPPED
- WITH ±5" LOUVERED BACKPLATES.

 2. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH L.E.D. MODULES WITH 12" LENSES.

			LOOP	DETECTOR OF	PERATION						
DETECTOR NO.	NO. OF SEGMENTS	LOOP SIZE (FT)	AMPLIFIER NO.	CHANNEL NO.	SPLICE PATTERN*	NO. OF TURNS	ø CALLED	ø EXTENSION	MODE: A=PULSE B=PRES. C=CALLING	DELAY (SECONDS)	EXTENSION (SECONDS)
10	1	6' x 6'	1	1	S	3	6	_	С	0	0
<u>√b</u>	3	6' x 6'	1	2	Р	3	6	6	В	0	0
20	1	13' x 6'	2	1	BL	4	6	_	С	0	0
Źb.	3	6' x 6'	2	2	Р	3	6	6	В	0	0
3	1	6' x 6'	3	1	BL	4	6	_	С	0	0
<u>3b</u>	3	6' x 6'	3	2	Р	3	6	6	В	0	0
4	1	6' x 6'	4	1	BL	4	5	-	С	0	0
<u>4</u> b	3	6' x 6'	4	2	Р	3	5	5	В	0	0
5	1	13' x 6'	5	1	BL	4	2	_	С	0	0
<u>5b</u>	3	6' x 6'	5	2	Р	3	2	2	В	0	0
<u>/6</u>	1	13' x 6'	6	1	BL	4	4	_	С	0	0
€b	3	13' x 6'	6	2	Р	3	4	4	В	0	0
			DI DIOVOLE								

* S=SERIES, P=SERIES/PARALLEL, BL=BICYCLE LOOPS

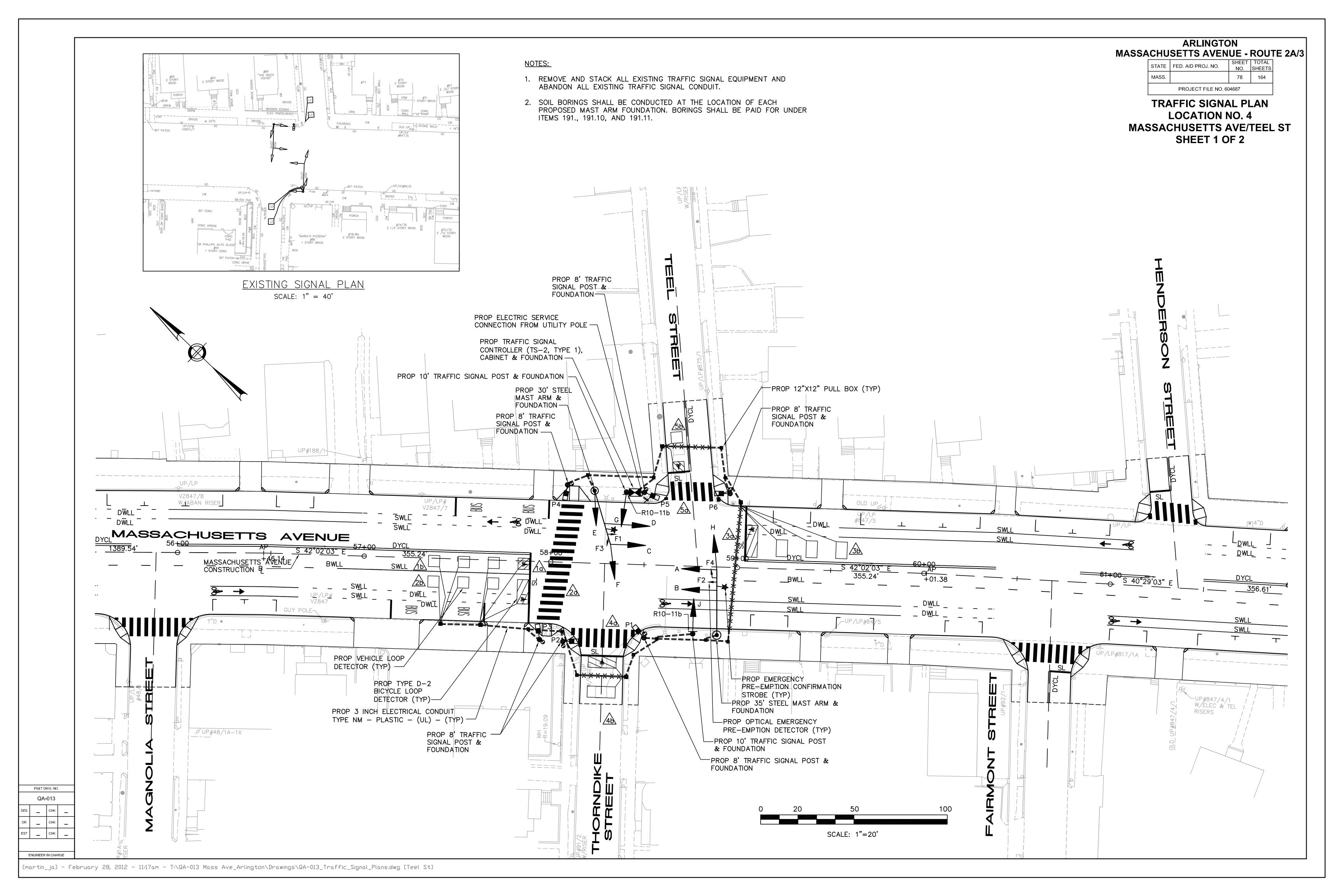
LOOP DETECTOR NOTES:

1. SEE LOOP DETECTOR DETAIL SHEETS FOR SPLICE PATTERN AND OTHER INFORMATION.

ENGINEER IN CHARGE

FS&T DWG. NO.

QA-013



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.		79	164
	PROJECT FILE NO. 60)4687	-

TRAFFIC SIGNAL PLAN
LOCATION NO. 4
MASSACHUSETTS AVE/TEEL ST
SHEET 2 OF 2

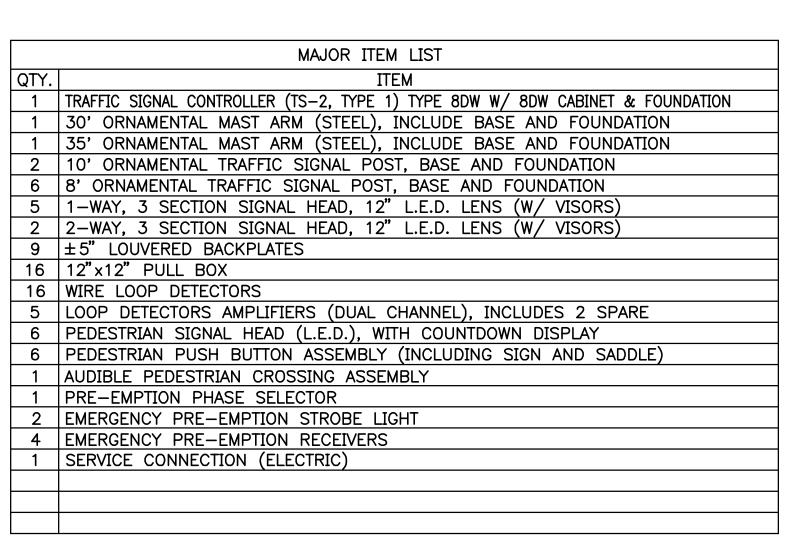
						SEQ	UENCE	E AND	TIMING	FOR FU	JLLY-A	CTUATE	D TRAFFIC	SIGNAL (ONTRO	L												EME	RGEN	CY PI	RE-EN	/PTIOI	N			
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S	TREET	DIR	HOUSING	ø1		ø2			ø3		ø4		ø5		ø6		ø7		Ø	8		ø9		1		øF1			øF2			øF3			øF4	
MASS A	AVE	EB	Α		R	R	R			R	R	R		G	Y	R			R f	R	R	R	R	(Y)	R	R	R	G	Υ	R	R	R	R	R	R	R
MASS A	AVE	EB	В		R	R	R			R	R	R		Ĝ	Y	R			R f	R	R	R	R	(Y)	R	R	R	Ĝ	Υ	R	R	R	R	R	R	R
MASS A	AVE	WB	С		⟨∪	Υ	R			R	R	R		R	R	R			R f	R R	R	R	R	(Y)	Ĝ	Y	R	R	R	R	R	R	R	R	R	R
MASS A	AVE	WB	D		G	Y	R			R	R	R		R	R	R			R f	R R	R	R	R	(Y)	G	Υ	R	R	R	R	R	R	R	R	R	R
THORN	DIKE ST	NB	E,F,G		R	R	R			G	Y	R		R	R	R			R f	R R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R
TEEL S	T	SB	H,J		R	R	R			R	R	R		R	R	R		_	G ,	/ R	R	R	R	(R)	R	R	R	R	R	R	R	R	R	G	Υ	R
PEDEST	FRIAN		P1-P6		DW	DW	DW			DW	DW	DW		DW	DW	DW)W D	W DV	v w	FDW	DW	OUT	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
	MINIMUM C	GREEN			15					4				15					4						8			8			5			5		
S- IDS)	EXTENSION	INTE	RVAL	-	3	-				3	_	-		3	_			-	3			_					-					-				
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	DETECTOR	MEMO	RY	<u> </u>	NC)N-L(DCK	<u>'</u>	<u>'</u>	N	DN-L(OCK	-	N	ION-LO	OCK	<u>'</u>		NON-	LOCK	L	OCK(P	ED)	EMERGENCY	<u>'</u>		<u> </u>	!				•	•	<u> </u>	<u>'</u>	
	RECALL SV					SOFT	,				OFF				SOFT				OF			OFF		E												

TECHNICAL NOTES

- 1. ANY PHASE NOT CALLED WILL BE SKIPPED. SIGNAL INDICATION WILL NOT CHANGE IF THE ASSIGNED RIGHT OF WAY DOES NOT CHANGE DURING THE NEXT PHASE CALLED.
- 2. THE RIGHT-OF-WAY MAY BE ASSIGNED TO ANY PHASE OR ANY COMBINATION OF NON-CONFLICTING PHASES. IF CALLS EXIST ON ALL PHASES, THE RIGHT-OF-WAY SHALL BE ASSIGNED IN ACCORDANCE WITH THE PREFERENTIAL PHASING SEQUENCE.
- 3. FLASHING OPERATION PER M.U.T.C.D. SECTION 4D.12
- 4. MAX I = NORMAL OPERATION MAX II = MON-FRI, 3 PM - 7 PM

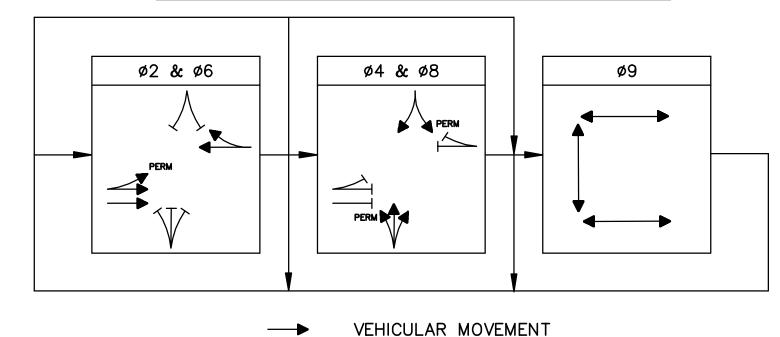
EMERGENCY VEHICLE PRE-EMPTION PHASING AND PRIORITY NOTES:

- 1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
- 2. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR F1 (OR F2, F3, F4) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE F1 (OR F2, F3, F4) GREEN UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN SERVICE EMERGENCY VEHICLE PRE-EMPTION PHASE F2 (OR F1) IF NECESSARY, THEN TIME PHASE PRE-EMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION. EMERGENCY VEHICLE PRE-EMPTION PHASE F3 AND F4 SHALL BE SIMILARLY SERVED.
- 3. MINIMUM GREEN, NORMAL VEHICLE CLEARANCE, SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
- 4. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.

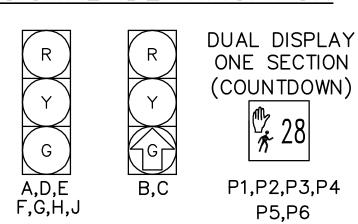


PLUS ALL NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIALS AND EQUIPMENT TO COMPLETE THE INSTALLATION.

PREFERENTIAL PHASING SEQUENCE



SIGNAL IDENTIFICATION



- 1. ALL TRAFFIC SIGNAL HEADS SHALL BE EQUIPPED WITH ±5" LOUVERED BACKPLATES.
- 2. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH L.E.D. MODULES WITH 12" LENSES.

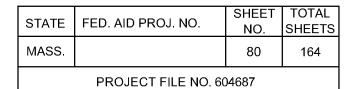
			LOOP	DETECTOR O	PERATION						
DETECTOR NO.	NO. OF SEGMENTS	LOOP SIZE (FT)	AMPLIFIER NO.	CHANNEL NO.	SPLICE PATTERN*	NO. OF TURNS	ø CALLED	ø EXTENSION	MODE: A=PULSE B=PRES. C=CALLING	DELAY (SECONDS)	EXTENSION (SECONDS)
1	1	6' x 6'	1	1	BL	4	6	_	С	0	0
<u> 1b</u>	3	6' x 6'	1	2	Р	3	6	6	В	0	0
20	1	13' x 6'	2	1	BL	4	6	_	С	0	0
<u>2b</u>	3	6' x 6'	2	2	Р	3	6	6	В	0	0
30	1	17' x 6'	3	1	BL	4	2	_	С	0	0
3b	3	9' x 6'	3	2	Р	3	2	2	В	0	0
40	1	15' x 6'	4	1	BL	4	4	_	С	0	0
<u>4</u> b	1	15' x 6'	4	2	S	3	4	4	В	0	0
50	1	6' x 6'	5	1	BL	4	8	_	С	0	0
<u>∕</u> 5b	1	6' x 6'	5	2	S	3	8	8	В	0	0

- * S=SERIES, P=SERIES/PARALLEL, BL=BICYCLE LOOPS
- LOOP DETECTOR NOTES:
- 1. SEE LOOP DETECTOR DETAIL SHEETS FOR SPLICE PATTERN AND OTHER INFORMATION.

ENGINEER IN CHARGE

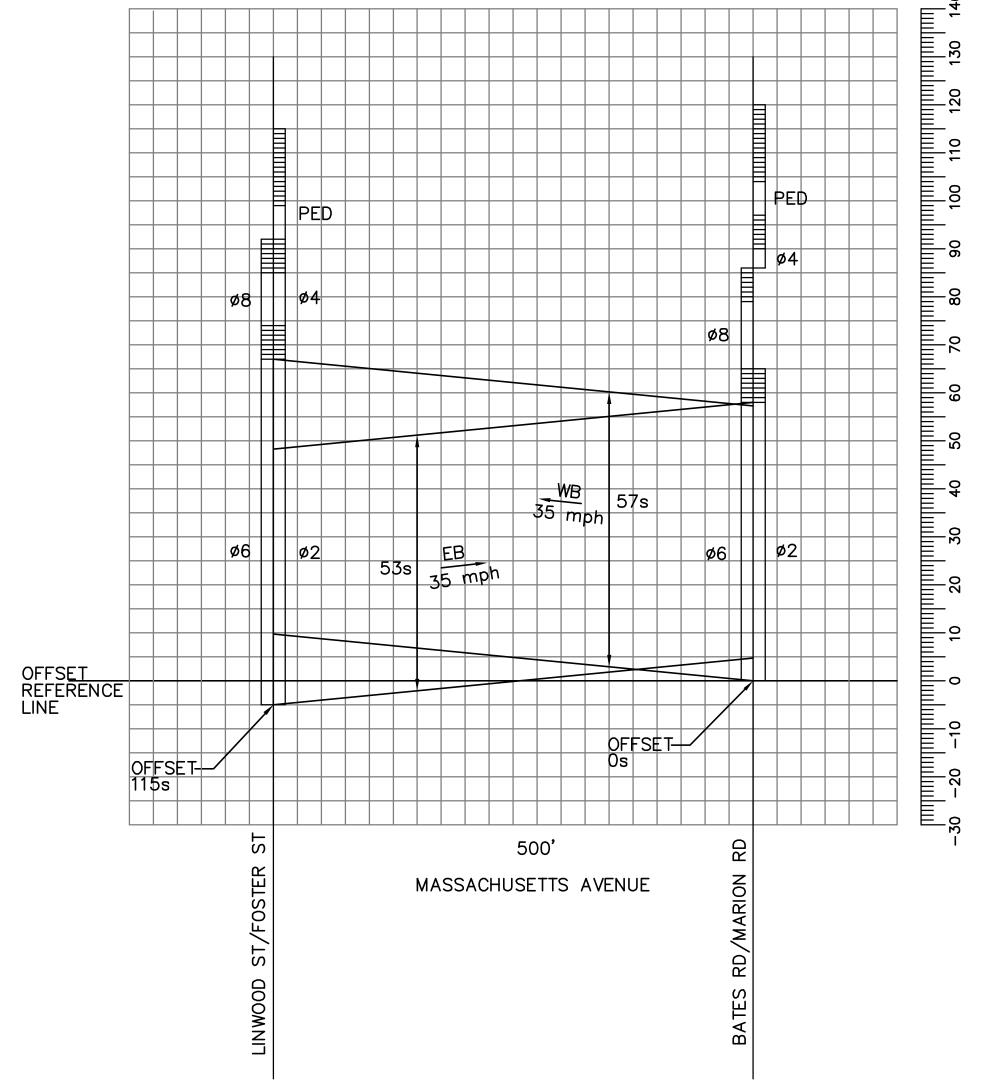
FS&T DWG. NO.

PEDESTRIAN MOVEMENT



TRAFFIC SIGNAL PLAN SIGNAL COORDINATION

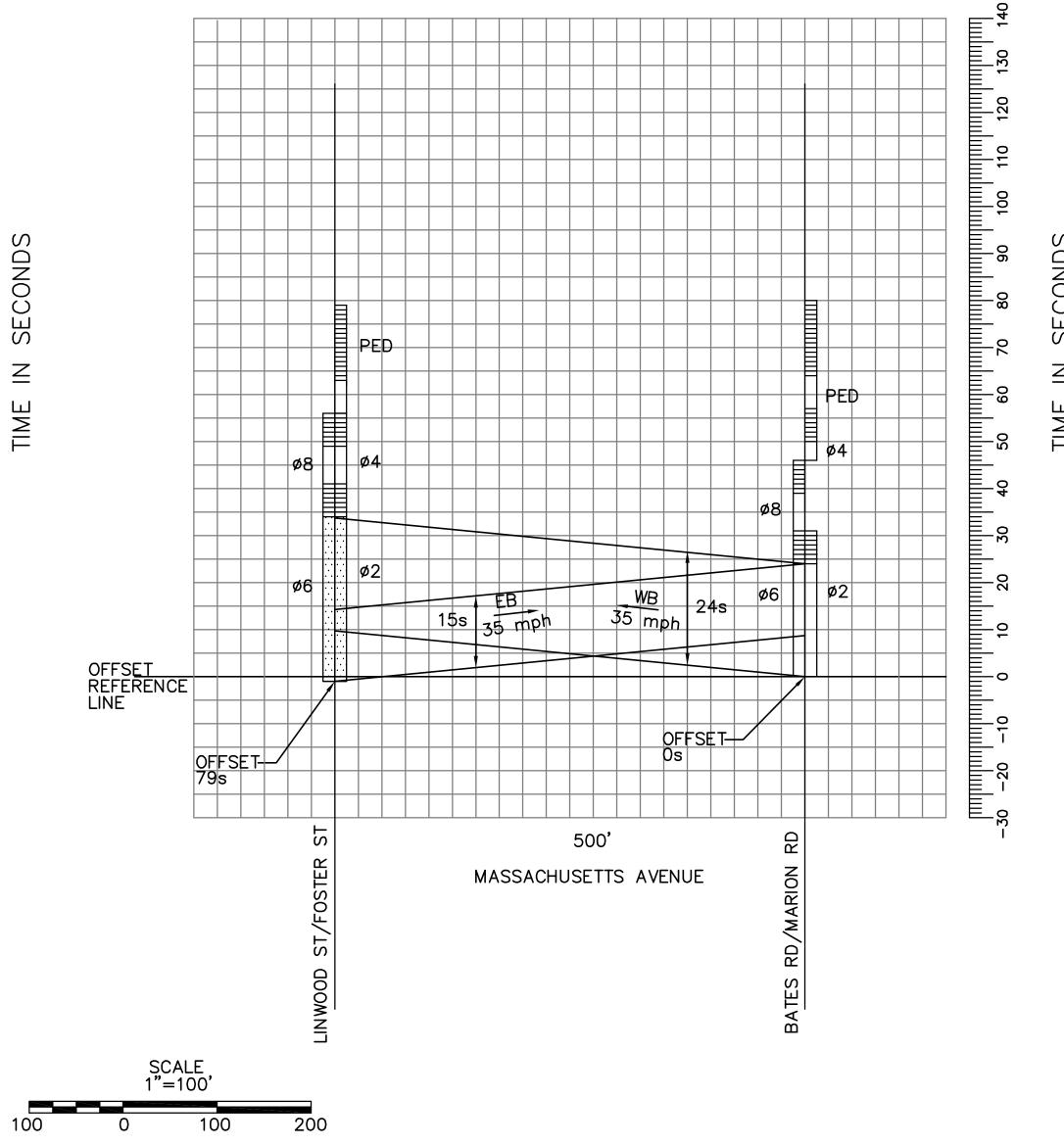
PLAN 1 WEEKDAY MORNING PEAK HOURS MASSACHUSETTS AVENUE 120 SECOND CYCLE



PLAN 2 WEEKDAY EVENING PEAK HOURS

MASSACHUSETTS AVENUE

80 SECOND CYCLE



<u>LEGEND</u>

- COORDINATED PHASE(S) GREEN TIME
- NON-COORDINATED PHASE(S) GREEN TIME
- CLEARANCE TIME (YELLOW + RED)
- PHASE MOVEMENT
 - INTERSECTION-INTERSECTION COORDINATION BAND

NOTE:

1. ALL OFFSETS REFERENCED TO THE BEGINNING OF GREEN OF THE COORDINATED PHASES.

MASSACHUSETTS AVENUE AT FOSTER STREET/LINWOOD STREET COORDINATION DATA (ALL ENTRIES IN SECONDS)

	PLAN 1	PLAN 2
CYCLE LENGTH	120	80
OFFSET	115	79
SPLIT ø2&ø6	79	42
SPLIT Ø4&Ø8	18	15
PEDESTRIAN Ø9	23	23
COORDINATED PHASE	ø2 & ø6	ø2 & ø6

MASSACHUSETTS AVENUE
AT BATES ROAD/MARION ROAD

COORDINATION DATA
(ALL ENTRIES IN SECONDS)

	PLAN 1	PLAN 2
CYCLE LENGTH	120	80
OFFSET	0	0
SPLIT Ø2&Ø6	65	31
SPLIT Ø8	21	15
SPLIT Ø4	11	11
PEDESTRIAN Ø9	23	23
COORDINATED PHASE	ø2 & ø6	ø2 & ø6

DAILY & WEEKLY COORDINATION PROGRAM

	MONDAY THRU FRIDAY	SATURDAY	SUNDAY
PLAN 1 120" CYCLE	0600-1000	I	ı
PLAN 2 80" CYCLE	1500-1900	_	_
FREE OPERATION	0000-0600 1900-2400	0000-2400	0000-2400
FLASH OPERATION	_	_	_

FS&T DWG, NO.

QA-013

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EST __ CHK __

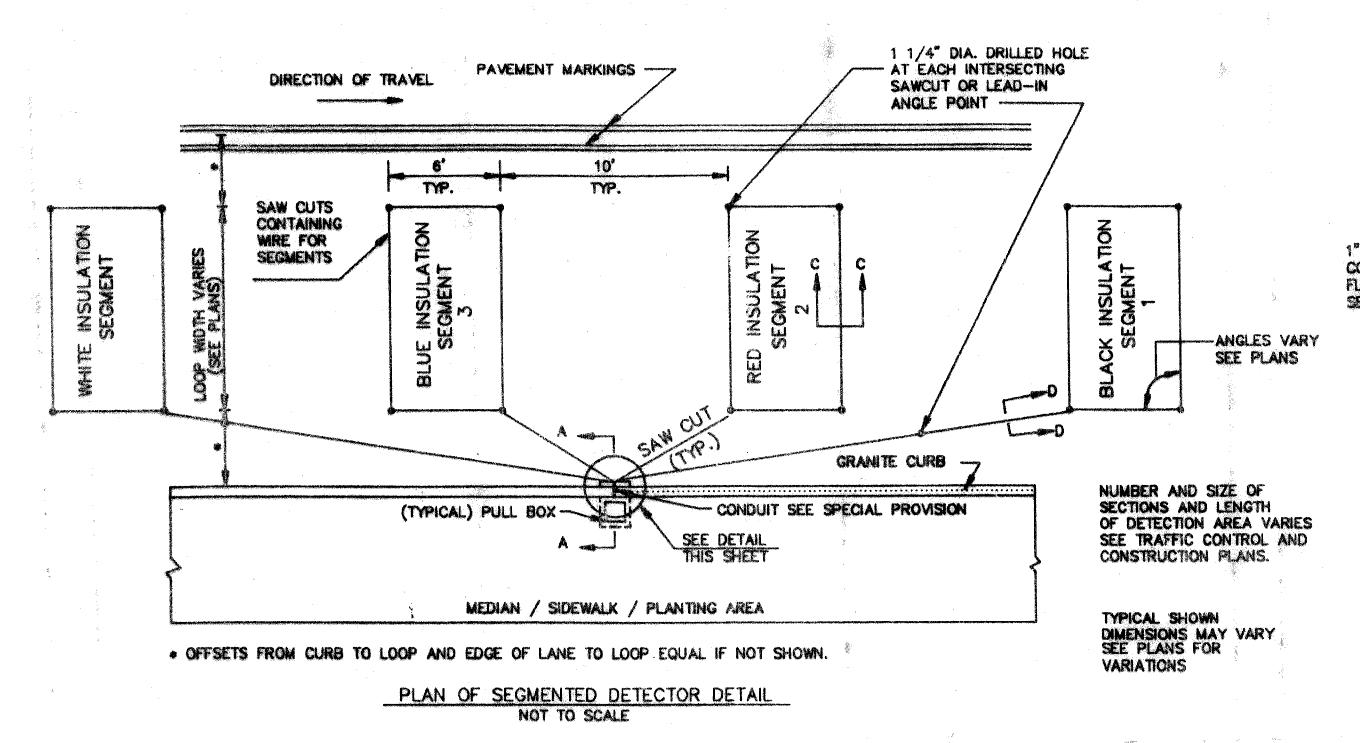
ARLINGTON

MASSACHUSETTS AVENUE - ROUTE 2A/3

MASS. 81 164	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
	MASS.		81	164

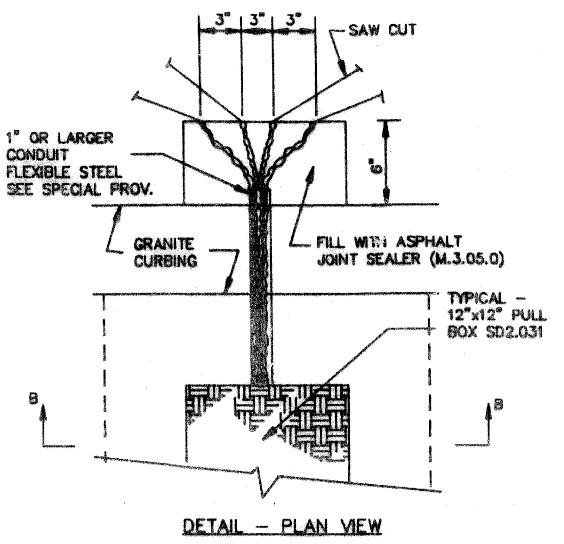
PROJECT FILE NO. 604687

TRAFFIC SIGNAL LOOP DETECTOR DETAILS



_ PAVEMENT JOINT

FILL WITH FILLER ----



TOP OF BINDER OR EXISTING PAVEMENT ----SURFACE COURSE 1 1/2" APPROVED FLEXIBLE SEALER. -FOAM STRIP, SEE NOTE 7. 14 AWG LOOP WIRES. THHN STRANDED ENCASED IN

NOT TO SCALE

LOOPS IN BINDER COURSE OR

1-1/2" MIN PROTECTIVE PLASTIC TUBING (LM.S.A. SPEC. NO. 51-5). SECTION C-C & D-D

EXISTING PAVEMENT TO BE RESURFACED

NOT TO SCALE

JOINT IN CURBING EXISTING / PROPOSED PAVEMENT SURFACE FILL WITH APPROVED FLEXIBLE SEALER FOAM STRIP, SEE NOTE 7. 14 AWG LOOP WIRES. THHN -GRANITE CURBING -STRANDED ENCASED IN PROTECTIVE PLASTIC TUBING (I.M.S.A. SPEC. NO. 51-5). SECTION C-C & D-D

> LOCPS IN SURFACE COURSE NOT TO SCALE (FOR AREAS OUTSIDE LIMITS OF PAVEMENT WORK ONLY) TO CONTROL CABINET, PULL BOX

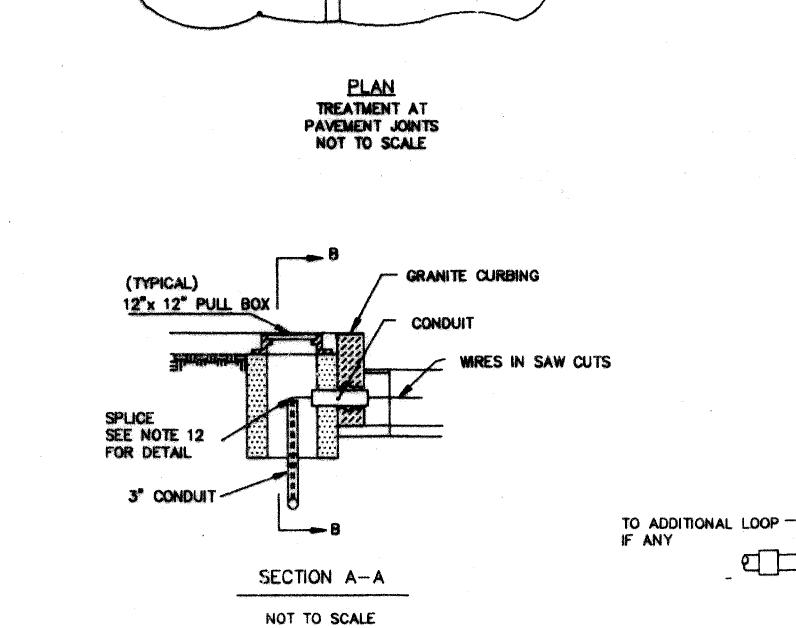
DETECTOR NOTES

- IN HANDHOLE, SPLICE ALL SEGMENTS TO TYPE II-SHIELDED LOOP DETECTOR LEAD-IN CABLE. SEGMENTS SHALL BE SPLICED IN PARALLEL, IN SERIES, OR IN A COMBINATION OF PARALLEL & SERIES AS SHOWN ON THE PLAN SHEET FOR EACH DETECTOR. NUMBER OF TURNS OF WIRE SHALL ALSO BE AS SHOWN ON THE PLAN SHEET FOR EACH DETECTOR. SEE NOTE 12.
- SEE SPECIAL PROVISIONS FOR REQUIREMENTS OF DETECTOR AMPLIFIER
- 3. LEAD IN WIRES SHALL BE TWISTED FROM SEGMENT TO SPLICE WITH SHIELDED CABLE FIVE TURNS PER FOOT, LEAD-IN SHALL BE TYPE II (MB. 16. II).
- BEFORE STARTING ANY SPLICING, THE ELECTRICAL CONTRACTOR SHALL FURNISH DATA SHEETS ON THE MATERIALS AND/OR METHODS TO BE USED IN ACCORDANCE WITH THE DEPARTMENTS STANDARD OPERATING PROCEDURES FOR APPROVAL OF SHOP DRAWINGS SEE SECTION 815.64, ESPECIALLY PARAGRAPH 1.
- THE METALLIC SHIELD WHICH SHALL ENCASE THE DETECTOR LEADS FROM A SPLICE (TYPICALLY LOCATED IN A PULL BOX NEAR THE ROADWAY COMPONENT OF THE DETECTOR) TO THE CONTROLLER, AND THE DRAIN WIRE UNDER THE METALLIC SHIELD, SHALL NOT BE GROUNDED TO THE EARTH GROUNDING BUSS IN THE CONTROLLER, AND THE SHIELD AND DRAIN WIRE SHALL BE CAREFULLY INSULATED FROM THE TRANSFORMER NEUTRAL OR FROM EARTH GROUND AT ALL POINTS ALONG ITS LENGTH. SPECIFICALLY. THIS INCLUDES CAREFUL INSULATION OF THE EXPOSED PORTION OF THE SHIELD AND THE DRAIN WIRE AT THE END AWAY FROM THE CONTROLLER WHERE IT IS SPLICED TO WIRES LEADING TO THE ROADWAY COMPONENT OF THE DETECTOR. THIS IS IMPORTANT TO AVOID A GROUND RETURN LOOP.
- 6. FILL ALL CONDUIT OPENINGS WITH DUCT SEAL.
- AFTER SAW CUTS ARE COMPLETE. BLOW OUT WATER WITH OIL-FREE COMPRESSED AIR UNTIL CUTS ARE CLEAN AND DRY. INSERT WIRE INTO CLEAN SLOT WITH A BLUNT, SMOOTH, ROUND EDGED TOOL OF WOOD OR PLASTIC SUCH AS A PAINT STIRRER. DO NOT USE A SCREWORIVER, THEN INSERT FOAM PLASTIC HOLD DOWN STRIPS, SIMILAR TO ETHA FOAM SB. STRIPS SHALL BE ABOUT 2" LONG, PLACED IN THE SLOT ABOUT EVERY 2 FEET THEN POUR SEALER, TAKING CARE TO ELIMINATE BUBBLES.
- THE COMBINED ROADWAY LOOP, TWISTED LEAD-IN WIRES, SPLICE AND SHIELDED LEAD-IN CABLE SHALL HAVE A RESISTANCE TO GROUND OF AT LEAST 100 MEGOHINS. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
- 9. FOR INSTALLATION OF SINGLE (ONE SEGMENT) SMALL WIRE LOOP DETECTOR DETAIL IS THE SAME
- 10. CUT LOOPS IN BINDER AND FILL WITH APPROVED FLEXIBLE SEALER.
- DETECTOR WIRE SHALL BE A DIFFERENT COLOR FOR EACH SEGMENT OF A DETECTOR GROUP. SEE DETAIL
- 12. SPLICING PATTERN P = SERIES/PARALLEL: SPLICE SEGMENTS 1 AND 3 OF AN INDIVIDUAL DETECTOR IN SERIES. SPLICE SEGMENTS 2 AND 4 IN SERIES. SPLICE THE RESULTANT TWO GROUPS IN PARALLEL SPLICE THE RESULTANT COMBINATION TO ONE LEAD-IN CABLE. CONNECT THIS CABLE TO AN OTHERWISE UNUSED AMPLIFIER CHANNEL.

SPLICING PATTERN S - SERIES: SPLICE ALL SEGMENTS (TYPICALLY FOUR, BUT MAY BE LESS) OF AN INDIVIDUAL DETECTOR IN SERIES. SPLICE THE RESULTANT COMBINATION TO ONE LEAD-IN CABLE TO AN OTHERWISE UNUSED AMPLIFIER CHANNEL.

REMSED 1/31/90

THE CONTRACTOR SHALL ENSURE THAT LOOP DETECTOR SAWCUTS WILL NOT DISTURB THE EXISTING CONCRETE SLAB LOCATED BELOW THE EXISTING PAVEMENT COURSES. THE CONTRACTOR MAY INSTALL LOOPS IN THE SURFACE COURSE TO AVOID DISTURBING THE CONCRETE SLAB.



1/2" RIGID PLASTIC CONDUIT-

LOOP WIRES .

SECTION B-B

NOT TO SCALE

- PAVEMENT JOINT

VERTICAL SECTION

NOT TO SCALE

TREATMENT AT PAVEMENT JOINTS

1/2" RIGID PLASTIC CONDUIT

DRAWING AMENDED BY FAY, SPOFFORD & THORNDIKE, LLC

FS&T DWG. NO.

QA-013

ARLINGTON MASSACHUSETTS AVENUE - ROUTE 2A/3 SAWCUT CONTAINING STATE | FED. AID PROJ. NO. NO SHEETS TYPE Q WIRE SEGMENTS MASS. 82 SEE NOTE 9 WINDING DETAILS INSTALLATION DETAILS - 1.2 IN DIA. DRILL HOLE PROJECT FILE NO. 604687 AT EACH INTERSECTING SAWCUT OR LEAD-IN TRAFFIC SIGNAL LANE LINE **BICYCLE LOOP DETECTOR DETAILS** 1 TURN 10 FT 23 FT (TYP) SIGN R10-22 (2 LAYERS) <u> 23 FI (TYP)</u> (TYP) 18 IN DIRECTION <u>NOTES:</u> DIRECTION OF TRAVEL OF TRAVEL 2 TURNS 1. REFER TO VEHICLE LOOP DETECTOR DETAIL SHEET (2 LAYERS) FOR ADDITIONAL NOTES AND CONSTRUCTION DETAILS. 2. ALL DETAILS ARE GRAPHICAL WITH NO SCALE. PROP WHITE BICYCLE LEGEND 3. THE NUMBER, SIZE, LOCATION AND LENGTH OF LANE LINE 1 TURN PROP 4 IN WHITE LINE DETECTION AREA VARIES AND SHALL BE DETERMINED (2 LAYERS) BY THE DESIGNER REFER TO TRAFFIC SIGNAL PLAN. 0.8 IN LINE (TYP) -EDGE OF ROAD -SHOULDER 4. BICYCLE LOOPS SHALL BE CONNECTED TO SEPARATE START FINISH LOOP DETECTOR AMPLIFIERS CAPABLE OF HIGHER LEVELS OF SENSITIVITY. TYPE Q DETECTOR—STANDARD QUADRUPOLE TYPE Q DETECTOR WITH STANDARD PAVEMENT MARKINGS AND SIGNING BICYCLE LOOPS SHALL BE INSTALLED IN THE BASE SIGN BORDER: WHITE BACKGROUND SIGN R10-22 COURSE OF EXISTING PAVEMENT. THE EXISTING R=1.5, TH=0.5, INS=.38 __ BLACK LEGEND AND LINES PAVEMENT SHALL BE COLD PLANED TO THE BASE COURSE AND SAWCUT FOR LOOP INSTALLATION. NOTE: ALL SIGN DIMENSIONS IN INCHES NOTE: SIGN PANEL NOT SHOWN TO SCALE 6. SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED FOR ALL BICYCLE DETECTORS TO INFORM CYCLISTS OF LANE LINE THE DETECTION AREA. 1 TURN (4 LAYERS) <u> 3/4 L</u> * 7. OFFSETS FROM LANE LINE EQUAL UNLESS OTHERWISE 2 TURNS (4 LAYERS) NOTED. SEE PLANS. 8. TYPE Q DETECTORS SHALL BE WIRED IN A FIGURE 1/4 LEIGHT PATTERN WITH A DOUBLE LAYER DESIGN 2 TURNS (4 LAYERS) DIRECTION 1/4 L ("2-4-2") WITH 2 TURNS IN THE PERIMETER SLOTS DIRECTION AND 4 TURNS IN THE CENTER SLOT AS SHOWN IN THE WINDING DETAIL. OF TRAVEL OF TRAVEL 1/4 L2 TURNS (4 LAYERS) 1/4 L9. BICYCLES WILL BE DETECTED WITHIN 4 IN. OF THE INTERIOR LONGITUDINAL LOOP WIRES FOR TYPE Q AND TOP OF PROPOSED D-Q DETECTORS. PAVEMENT 1 TURN (4 LAYERS) 🕽 10. PROVIDE 3 TURNS FOR TYPE D-1 DETECTORS. START EDGE OF ROAD -SEE NOTE 7 (TYP) - SURFACE COURSE FINISH 11. INSTALL 2 LAYERS OF WIRE WOUND IN THE SAME 1.5 IN SIGN R10-22 DIRECTION IN BOTH LAYERS FOR TYPE D-2 DETECTORS. THE RESULT IS 4 TURNS IN EACH DIAGONAL. TYPE D-Q DETECTOR-DOUBLE QUADRUPOLE TYPE D-Q DETECTOR - APPROVED FLEXIBLE SEALER 12. RIGHT JUSTIFIED LOOP DETECTORS SHALL BE - SAWCUT CONTAINING TYPE CONSIDERED FOR THE FOLLOWING CONDITIONS: D-Q WIRE SEGMENTS FOAM STRIP a) BICYCLE STOPPING ON THE RIGHT SIDE OF A SEE NOTE 9 THRU TRAVEL LANE. #14 AWG LOOP WIRES LANE LINE b) BICYCLE STOPPING ON THE RIGHT SIDE OF AN THHN STRANDED ENCASED EXCLUSIVE LEFT TURN LANE. IN PROTECTIVE PLASTIC TUBING MOTOR VEHICLE LOOP DETECTOR-(I.M.S.A. SPEC. NO. 51-5) 13. LEFT JUSTIFIED LOOP DETECTORS SHALL BE (VARIES SEE TABLE) CONSIDERED FOR THE FOLLOWING CONDITIONS: a) BICYCLE STOPPING ON THE LEFT SIDE OF A SHARED LEFT/THRU LANE. SECTION THRU LOOP DETECTOR DIRECTION BICYCLE STOPPING JUST TO THE RIGHT OF THE CENTERLINE WHEN TURNING LEFT ON A OF TRAVEL TWO-LANE ROADWAY. DIRECTION SAWCUT SLOT DEPTH GUIDE RECTANGULAR LOOP DETECTORS SHALL BE CONSIDERED OF TRAVEL FOR BICYCLES STOPPING ON EITHER THE LEFT OR SLOT SIZE RIGHT SIDE OF A TWO-LANE ROADWAY. THE MINIMUM TURNS OF WIRE OFFSET FROM LANE LINE OR CURB LINE SHALL BE START DEPTH (IN) WIDTH (IN) LANE LINE 15. PAVEMENT CORES OR TEST PITS MAY BE REQUIRED 1.5 0.5 TO DETERMINE THE DEPTH OF EXISTING PAVEMENT FINISH └1.0 FT (MIN) AND CONFIRM THAT THE DETECTION OPTION CHOSEN 1.5 0.5 EDGE OF ROAD - SHOULDER AND CORRESPONDING WINDING PATTERN CAN BE SIGN R10-22 1.5 0.5 ACCOMMODATED. SAWCUT CONTAINING TYPE D-1 DETECTOR RIGHT JUSTIFIED (SEE NOTE 12) 0.5 TYPE D-1 WIRE SEGMENT\$ 2.0 4 16. THESE DETAILS APPLY TO BICYCLE LOOPS INSTALLED TYPE D-1 AND D-2 DETECTORS IN ROADWAYS. PUSH BUTTON ACTUATION SHALL BE 2.0 0.5 CONSIDERED FOR RECREATIONAL BIKE PATHS. SAWCUT CONTAINING TYPE (TYPE D1 SHOWN) 2.0 0.5 17. THE MINIMUM DIMENSION FOR L SHALL BE 6 FT D-2 WIRE SEGMENTS MIN. FOR DETECTORS TYPE D-Q, D-1 & D-2. FINAL 2.0 0.5 DIMENSIONS SHALL BE DETERMINED BY THE LANE LINE 2.0 0.5 DESIGN_ENGINEER. - 1.0 FT (MIN) MOTOR VEHICLE LOOP DETECTOR-VÅRIES SEE NOTÉ 17) THE CONTRACTOR SHALL ENSURE THAT LOOP DETECTOR SAWCUTS WILL NOT DISTURB THE EXISTING CONCRETE SLAB LOCATED BELOW THE EXISTING PAVEMENT COURSES. THE CONTRACTOR MAY INSTALL LOOPS IN THE SURFACE COURSE TO DIRECTION DIRECTION AVOID DISTURBING THE CONCRETE SLAB. OF TRAVEL OF TRAVEL NOTE: REVISED FEBRUARY 22, 2006 FINISH | START LANE LINE EDGE OF ROAD ── SHOULDER DRAWING AMENDED BY FAY, SPOFFORD & THORNDIKE, LLC PROPOSED AREA OF DETECTION TYPE D-2 DETECTOR LEFT JUSTIFIED (SEE NOTE 13) A LARGER AREA OF DETECTION MAY BE REQUIRED -TYPE D-1 AND D-2 DETECTORS BASED ON FIELD CONDITIONS AND SHALL BE MASSACHUSETTS HIGHWAY DEPARTMENT SIGN R10-22 DETERMINED BY THE DESIGNER. (TYPE D2 SHOWN) TRAFFIC ENGINEERING REVISED FEBRUARY 22, 2006 [martin_ja] - February 27, 2012 - 4:54pm - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic Details - Bicycle Loop Detector.dwg [BIKE LOOP DETECT]

FS&T DWG. NO.

QA-013

ARLINGTON

MASSACHUSETTS AVENUE - ROUTE 2A/3

STATE FED. AID PROJ. NO. SHEET NO. SHEET NO. SHEET NO. SHEET NO. SHEET NO. 604687

TRAFFIC SIGNAL DETAILS
TYPE II MAST ARMS
INDEX AND NOTES

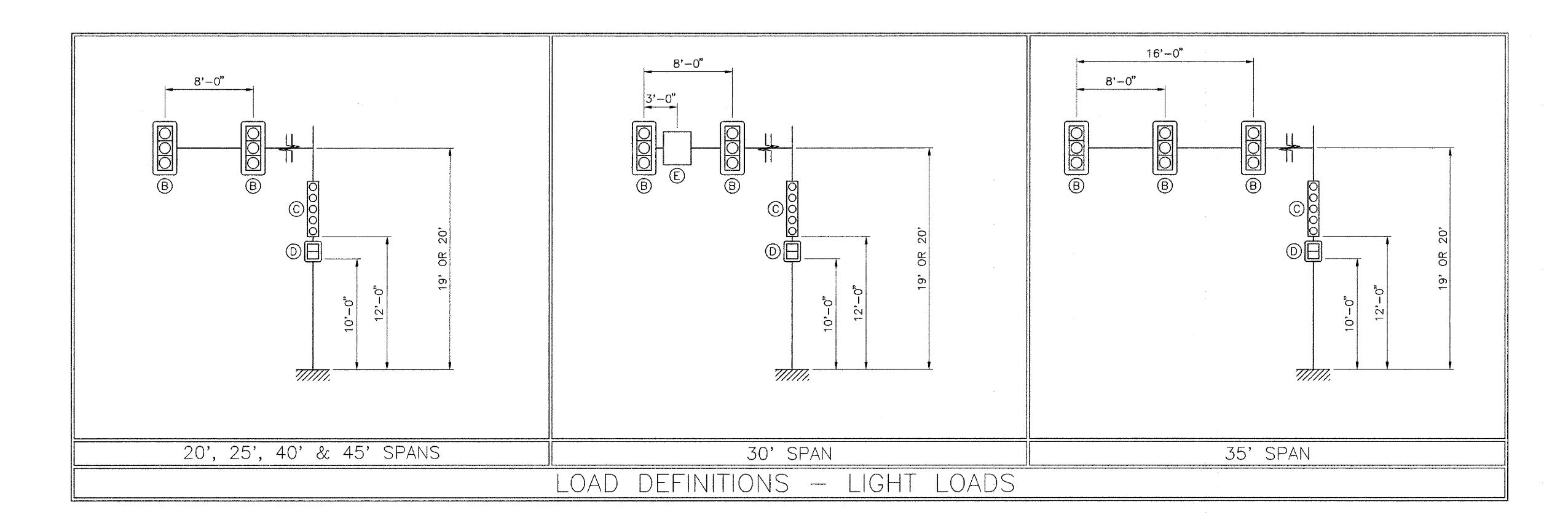
MAST ARM & FOUNDATION Details Standard Drawings

NOTES

- 1. For these standard drawings the Design Wind Speed for all Mast Arm Structures shall be 130 MPH.
- 2. For these standard drawings the Design Wind Speed for mast arm foundations located in the following counties: Plymouth, Bristol, Barnstable, Dukes, and Nantucket counties in District 5 and Berkshire county in District 1 shall be 130 MPH. The design wind speed for mast arm foundations for the remainder of the state shall be 110 MPH.
- 3. For these standard drawings the mast arm structure design life shall be 25 years.
- 4. For these standard drawings the Fatigue Category no. 2 was used and truck induced gusts were excluded in the design.
- 5. These standard drawings do not apply for mast arm structures at intersections with an ADT greater than 40,000 vehicles and a truck percentage of greater than 10%. The responsibility for the design of mast structures and foundations will rest with the design engineer. The structure design life will be 50 years and the fatigue category shall be no. 1. The design wind speed criteria shall be as shown in Notes Nos. 1 & 2. The design will be submitted to MassDOT for review and comment.
- 6. For strain pole, dual mast arm designs, or mast arms longer than 45 feet, notes 1, 2, 3 and 4 will apply, if ADT (>40,000 vehicles) and truck percentage (10%) criterion is met, note 5 design criteria (50 year design life, fatigue category no. 1, wind design speed notes 1 and 2) will apply. The responsibility for the design of these structures and foundations will rest with the design engineer. The design will be submitted to MassDOT for review and comment.



NO.	REVISION	DATE	MASSACHUSETTS DEPARTMENT OF TRA	INSPORTATION
			HIGHWAY DIVISON	
			RECOMMENDED FOR APPRO	VAL
			Meil E. Bowsheav	2/11/11
			TRAFFIC ENGINEER	DATE
			Ogenh M Charley P.E.	2/17/11
			BRIDGE ENGINEER	DATE
•			And a. Anuments	1/24/2011
			CHIEF ENGINEER	DATE



STATE FED. AID PROJ. NO. SHEET NO. SHEETS

MASS. 84 164

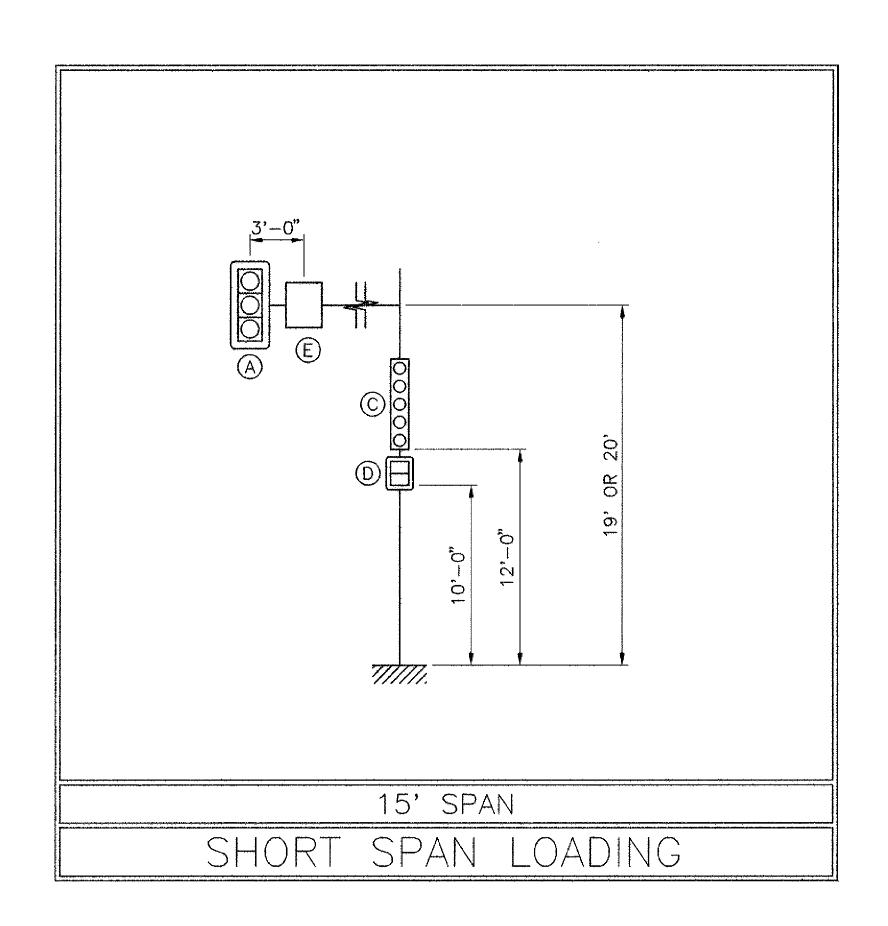
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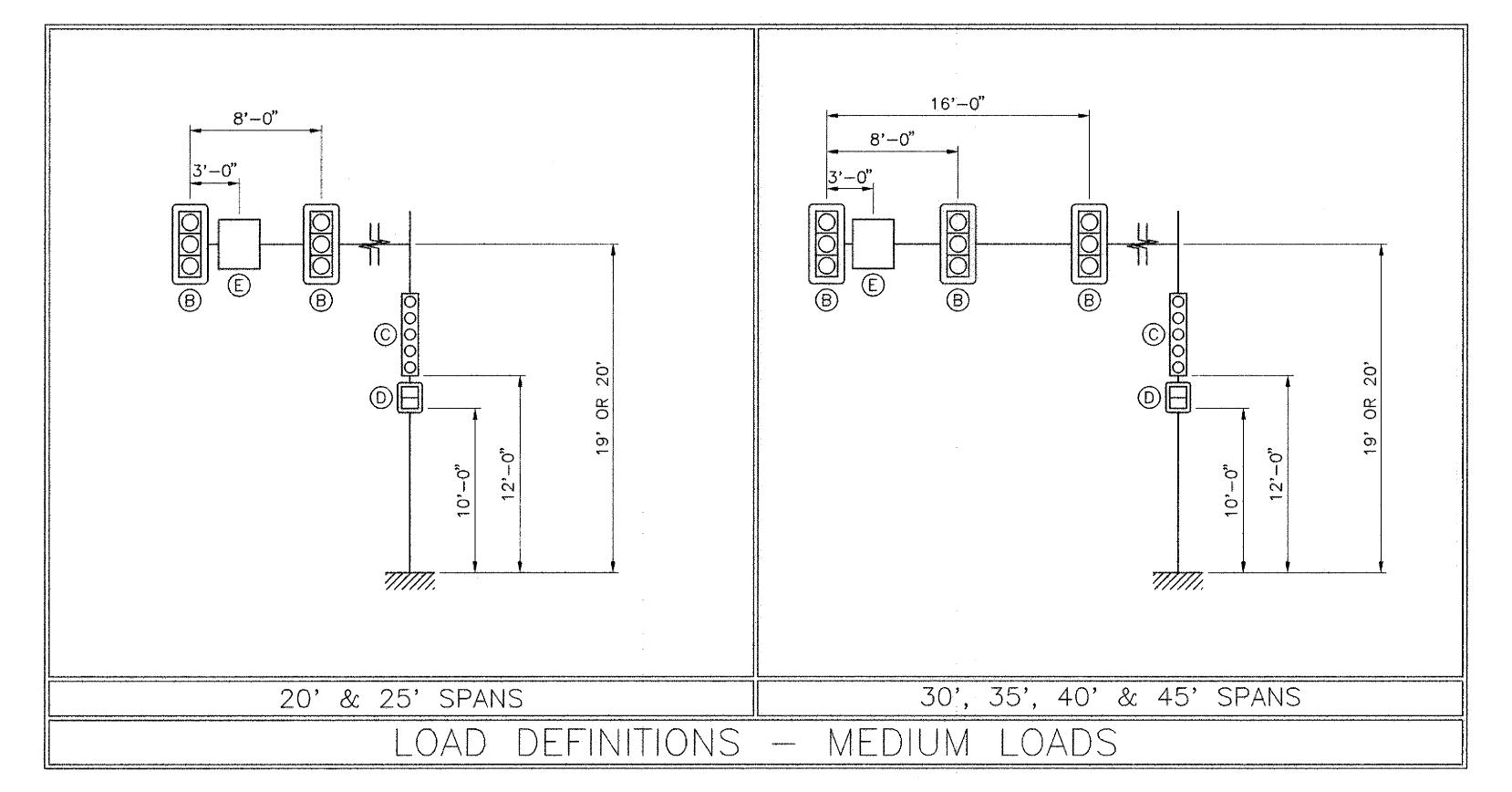
TRAFFIC SIGNAL DETAILS

TYPE II MAST ARMS

LIGHT, MEDIUM & SHORT SPAN

LOAD DIAGRAMS





DEVICE	DESCRIPTION	PROJ. AREA (FT~2)	WEIGHT (LBS)								
\odot	3 SECTION, 3 WAY SIGNAL	13.50	202								
(B)	3 SECTION, 1 WAY SIGNAL	8.67	74								
(()	5 SECTION, 1 WAY SIGNAL	13.33	110								
(0)	DUAL PEDESTRIAN SIGNAL	8.00	80								
E	30" X 36" REGULATORY SIGN	7.50	23								
NOTE: ALL SIGNALS HAVE 5.0" BACKPLATES											

FS&T DWG. NO.

STANDARD DRAWINGS

TYPE II MAST ARMS
LIGHT, MEDIUM & SHORT SPAN
LOAD DIAGRAMS

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

CHIEF ENGINEER

BRIDGE ENGINEER

TRAFFIC ENGINEER

SHEET 2 OF 5 SHEETS

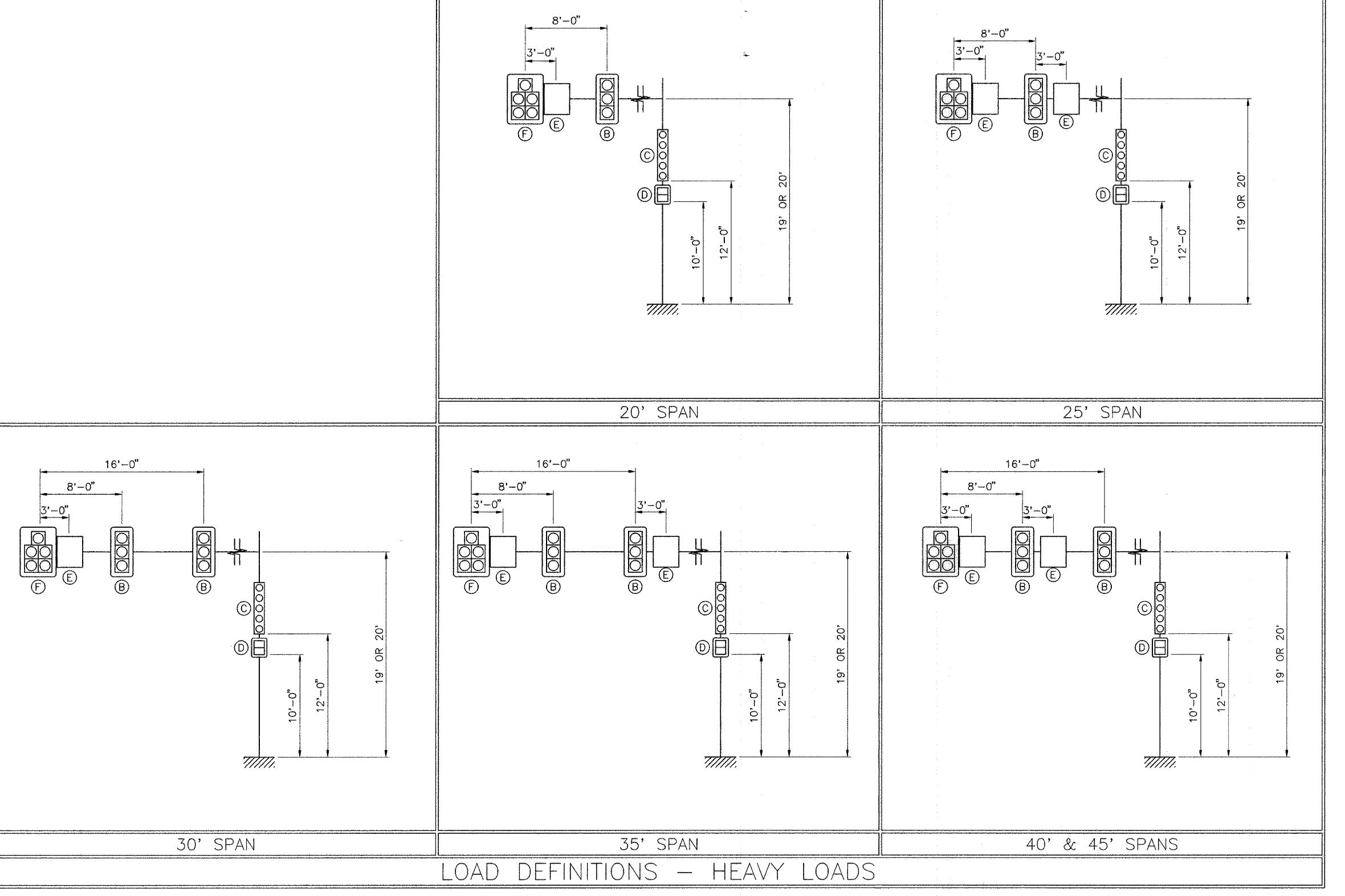
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ISSUED FOR CONSTRUCTION

[martin_ja] - February 27, 2012 - 4:54pm - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic Details - Type II Mast Arms.dwg [LOAD DIAG. - LIGHT-MED-SHORT]

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS								
MASS.		85	164								
PROJECT FILE NO. 604687											

TRAFFIC SIGNAL DETAILS
TYPE II MAST ARMS
HEAVY LOAD DIAGRAMS



DEVICE	DESCRIPTION	PROJ. AREA (FT~2)	WEIGHT (LBS)								
A	3 SECTION, 3 WAY SIGNAL	18.29	202								
В	3 SECTION, 1 WAY SIGNAL	8.67	74								
	5 SECTION, 1 WAY SIGNAL	13.33	110								
D DUAL PEDESTRIAN SIGNAL 8.00 80											
E 30" X 36" REGULATORY SIGN 7.50 23											
F	5 SECTION, 2 WAY SIGNAL	21.95	215								
NOTE: ALL SIGNALS HAVE 5.0" BACKPLATES											

FS&T DWG. NO.

QA-013

STANDARD DRAWINGS

TYPE II MAST ARMS
HEAVY LOAD DIAGRAMS

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

CHIEF ENGINEER

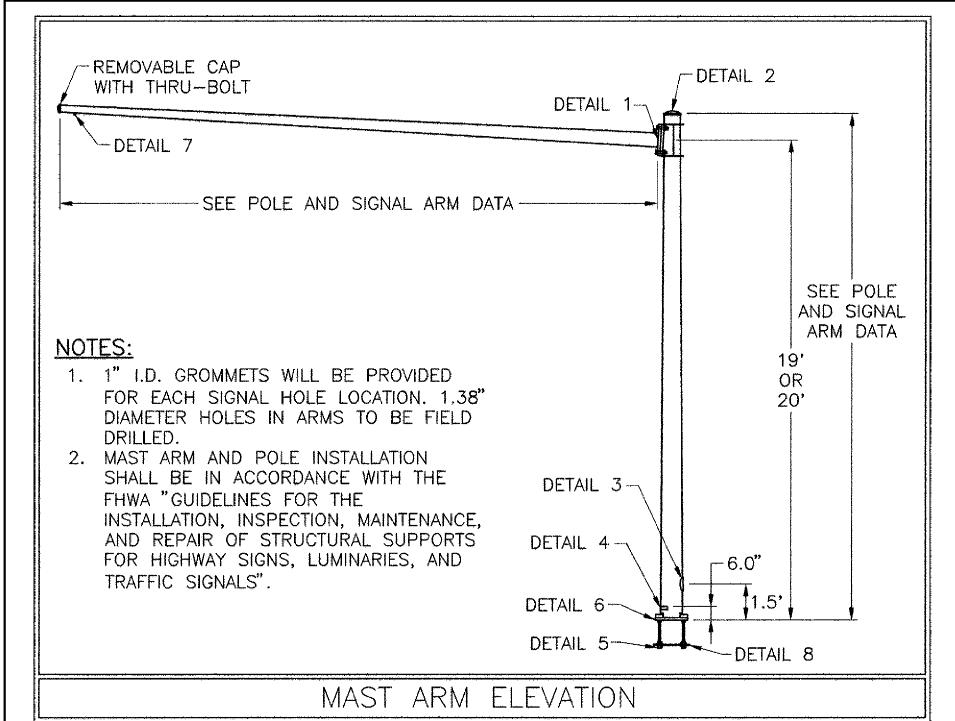
TRAFFIC ENGINEER

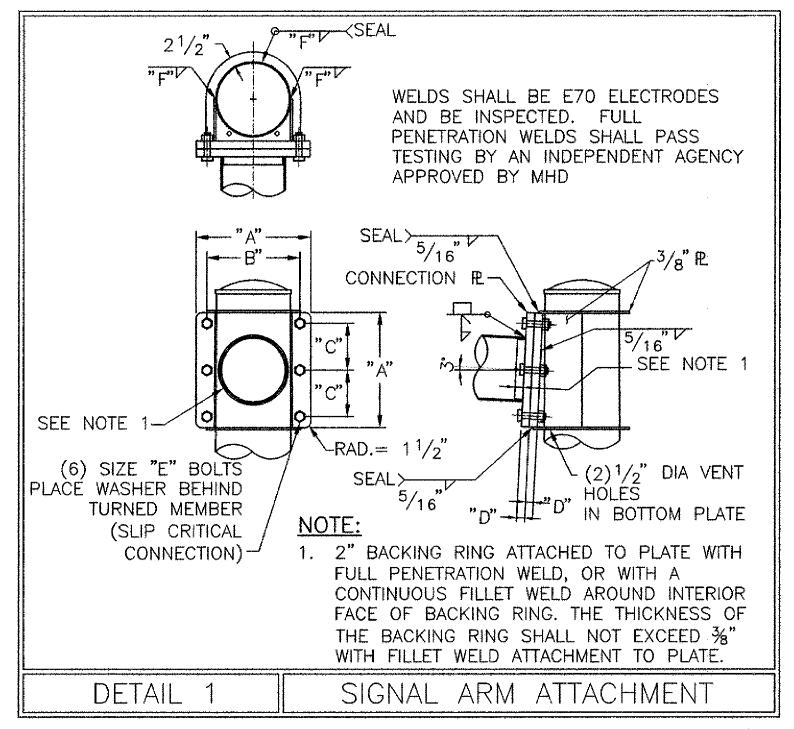
SHEET 3 OF 5 SHEETS

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ISSUED FOR CONSTRUCTION

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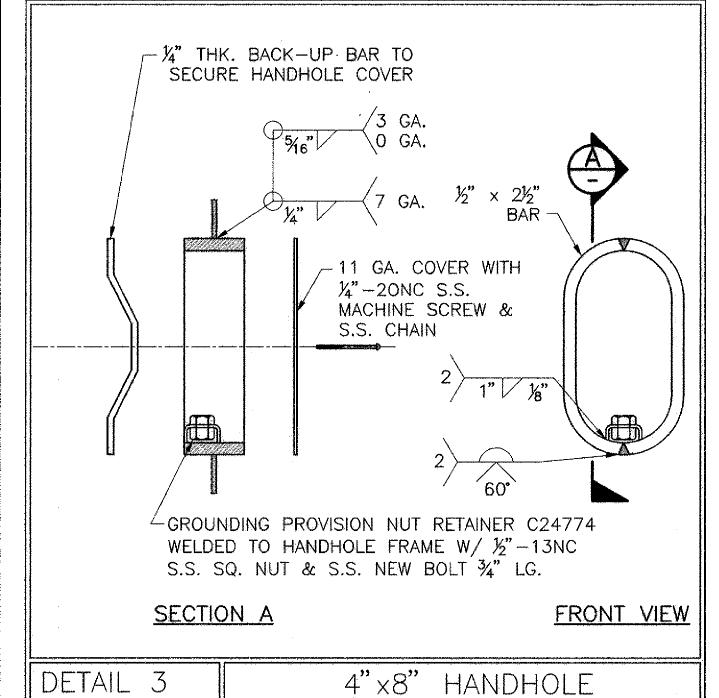


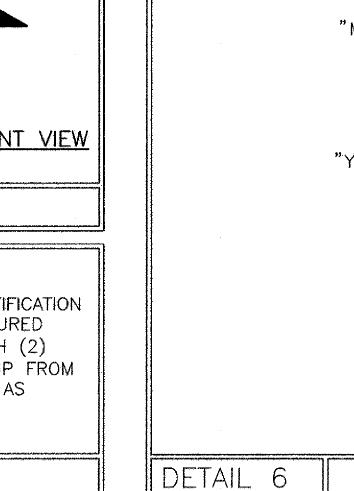


"C" HOOK FOR WIRING AND HANDLING

0.50" DIA. COMMERCIAL GRADE HOT

ROLLED BAR-





POLE TYPE MA-XXXX $^-$ 1.50" X 3.25" IDENTIFICATION TAG, ALUMINUM SECURED TO POLE SHAFT WITH (2) XXX-XX0.19" RIVETS 6.0" UP FROM BASE AND STAMPED AS SHOWN MANUFACTURER MAST ARM LENGTH

I.D. TAG

DETAIL 4

2" BACKING RING ATTACHED TO PLATE WITH FULL PENETRATION WELD, OR WITH A CONTINUOUS FILLET WELD AROUND INTERIOR FACE OF BACKING RING. THE THICKNESS OF THE BACKING RING SHALL NOT EXCEED %" WITH FILLET WELD ATTACHMENT TO PLATE. -NUT COVER MAST ARM L I.D. TAG _ 22.50° C HAND HOLE POLE BASE DETAIL 6

ARLINGTON **MASSACHUSETTS AVENUE - ROUTE 2A/3**

PROJECT FILE NO. 604687

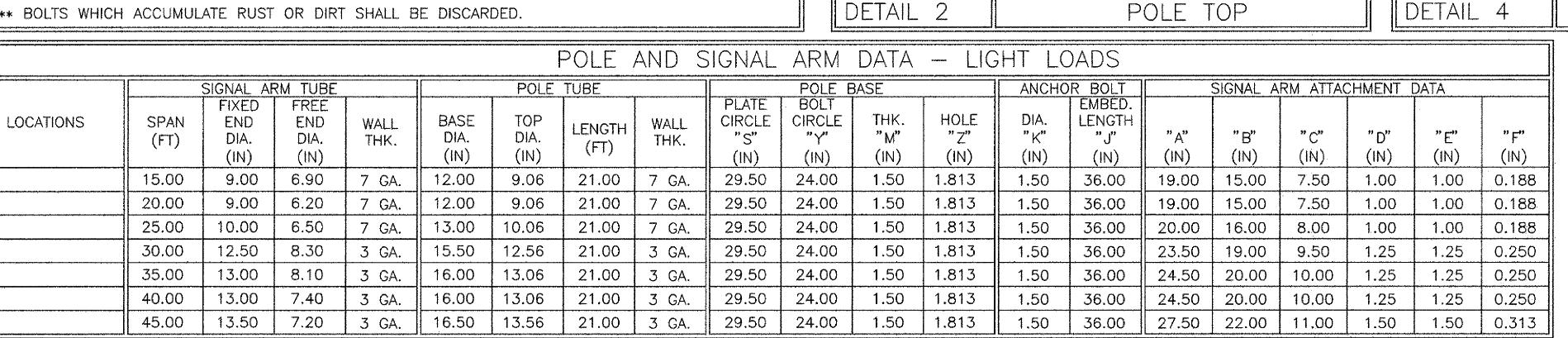
TRAFFIC SIGNAL DETAILS

TYPE II MAST ARMS

STATE | FED. AID PROJ. NO.

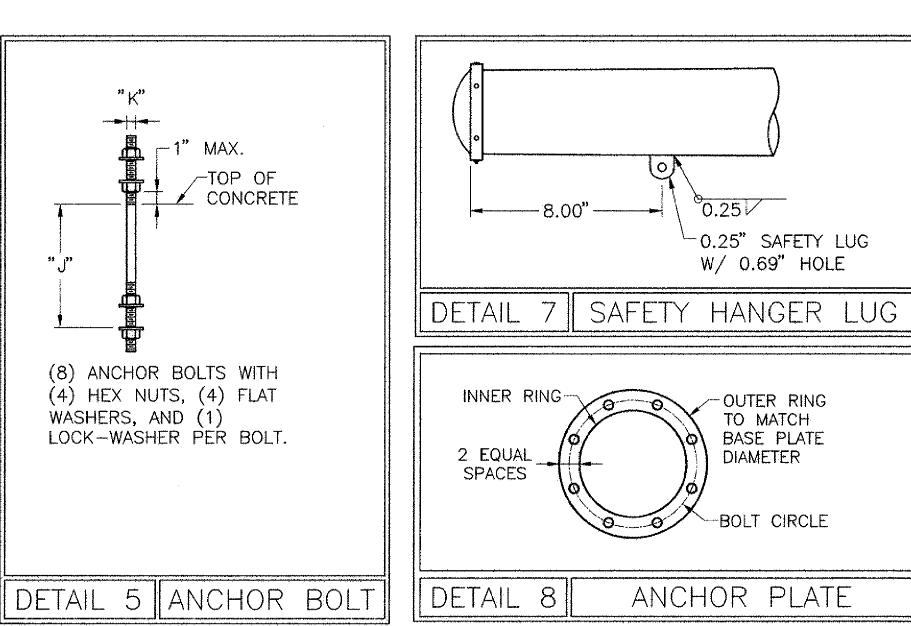
MASS.

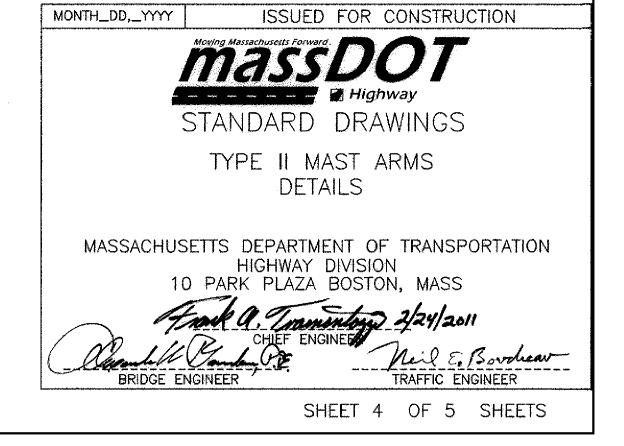
	MA	TERI	<u>AL</u>	DATA		
COMPONENT	DESIGNATION	YIELD (KSI)	,,	COMPONENT	DESIGNATION	YIELD (KSI)
POLE TUBE	ASTM A595 GR. A	55	ARM	TUBE	ASTM A595 GR. A	55
POLE BASE PLATE	AASHTO M270	50	ARM	CONNECTION PLATE	AASHTO M270	50
ANCHOR BOLTS	AASHTO M314	55	ARM	CONNECTING BOLTS	AASHTO M164 **	
GALVANIZING	AASHTO M111 OR M232					
** BOLTS WHICH	ACCUMULATE RUST OR DIF	RT SHAI	L BE	DISCARDED.		



						P	OLE AI	ND SI	GNAL	ARM [ATA -	- MED	IUM L	OADS						
	SIGNAL ARM TUBE						TUBE			POLE E	BASE		ANCHO	R BOLT		SIGNAL A	RM ATTAC	HMENT	DATA	
LOCATIONS	(FT) DIA. DIA. THK.		BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	WALL THK.	PLATE CIRCLE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	EMBED. LENGTH "J" (IN)	"A" (IN)	"B" (IN)	" C" (IN)	"D" (IN)	" E" (IN)	"F" (IN)		
	15.00	9.00	6.90	7 GA.	12.00	9.06	21.00	7 GA.	29.50	24.00	1.50	1.813	1.50	36.00	19.00	15.00	7.50	1.00	1.00	0.188
	20.00	10.00	7.20	3 GA.	13.00	10.06	21.00	З GA.	29.50	24.00	1.50	1.813	1.50	36.00	20.00	16.00	8.00	1.00	1.00	0.250
	25.00	11.00	7.50	3 GA.	14.00	11.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	23.50	19.00	9.50	1.25	1.25	0.250
	30.00	13.00	8.80	3 GA.	16.00	13.06	21.00	3 GA.	29,50	24.00	1.50	1.813	1.50	36.00	23.50	19.00	9.50	1.25	1.25	0.250
	35.00	14.00	9.10	3 GA.	17.00	14.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11.00	1.50	1.50	0.250
	40.00	15.00	9.40	3 GA.	18.00	15.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11:00	1.50	1.50	0.250
	45.00	16.00	9.70	O GA.	19.00	16.06	21.00	0 GA.	29.50	24.00	1.50	1.813	1.50	36.00	29.50	24.00	12.00	1.75	1.50	0.313

		SIGNAL AF	RM TUBE			POLE	TUBE			POLE E	ASE		ANCHO	OR BOLT	SIGNAL ARM ATTACHMENT DATA					
LOCATIONS	SPAN (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	WALL THK.	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	WALL THK.	PLATE CIRCLE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLÉ "Z" (IN)	DIA. "K" (IN)	EMBED. LENGTH "J" (IN)	"A" (IN)	"B" (IN)	"C" (IN)	"D" (IN)	"E" (IN)	"F" (IN)
	15.00	9.00	6.90	7 GA.	12.00	9.06	21.00	7 GA.	29.50	24.00	1.50	1.813	1.50	36.00	19.00	15.00	7.50	1.00	1.00	0.188
	20.00	12.50	9.70	3 GA.	15.50	12.56	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	24.00	19.00	9.50	1.25	1.25	0.250
	25.00	14.00	10.50	3 GA.	17.00	14.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11.00	1.50	1.50	0.250
	30.00	15.50	11.30	3 GA.	18.50	15.56	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11.00	1.50	1.50	0.250
	35.00	16.50	11.60	O GA.	19.50	16.56	21.00	O GA.	34.50	28.00	1.75	2.063	1.75	36.00	29.50	24.00	12.00	1.75	1.50	0.313
	40.00	17.50	11.90	O GA.	20.50	17.56	21.00	O GA.	34.50	28.00	1.75	2.063	1.75	36.00	29.50	24.00	12.00	1.75	1.50	0.31
	45.00	18.50	12.20	0 GA.	21.50	18.56	21.00	O GA.	34.50	28.00	1.75	2.063	1.75	36.00	31.50	26.00	13.00	2.00	1.50	0.313





QA-013

ENGINEER IN CHARGE

FS&T DWG. NO.

[martin_ja] - February 27, 2012 - 4:55pm - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic Details - Type II Mast Arms.dwg [DETAILS]

			PI	ER FOUNI	DATIONS	FOR 110 N	1PH WIND	SPEED :	ZONE			
					LIGI	HT LOADING	CONDITION	ONS				
	15	' & 20' MAST	ARMS	25'	' & 30' MAST	ARMS	35	'& 40' MAST	ARMS		45' MAST AR	MS
SOIL TYPE	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'-6"	6'-0"	18-#8	3'-6"	8'-0"	18-#8	3'-6"	8'-0"	18-#8	3'-6"	9'-0"	18-#8
WET SAND	3'-6"	7'-0"	18-#8	3'-6"	9'-0"	18-#8	3'-6"	9'-0"	18-#8	3'-6"	9'-0"	18-#8
CLAY (MEDIUM STIFF)	3'-6"	11'-0"	18-#8	3'-6"	12'-0"	18-#8	3'-6"	12'-0"	18-#8	3'-6"	12'-0"	18-#8
ALLUVIAL	3'-6"	8'-0"	18-#8	3'-6"	10'-0"	18-#8	3'-6"	10'-0"	18-#8	3'-6"	11'-0"	18-#8
			and the second s		MED	IUM LOADIN	G CONDIT	IONS				
	15	' & 20' MAST	ARMS	25'	' & 30' MAST	ARMS	35	'& 40' MAST	ARMS		MS	
SOIL TYPE	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'-6"	7'-0"	18-#8	3'-6"	9-0"	18-#8	4'-0"	9-0"	18-#9	4'-6"	8'-0"	18-#10
WET SAND	3'-6"	8'-0"	18-#8	3'-6"	9'-0"	18-#8	4'-0"	10'-0"	18-#9	4'-6"	9'-0"	18-#10
CLAY (MEDIUM STIFF)	3'-6"	11'-0"	18-#8	3'-6"	12'-0"	18-#8	4'-0"	13'-0"	18-#9	4'-6"	14'-0"	18-#10
ALLUVIAL	3'-6"	9'-0"	18-#8	3'-6"	10'-0"	18-#8	4'-0"	11'-0"	18-#9	4'-6"	10'-0"	18-#10
					HEA	VY LOADING	CONDITI	ONS				
	15' & 20' MAST ARMS 25' & 30' MAST ARMS 35' & 40' MAST ARMS 45' MAST ARMS											MS
SOIL TYPE	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'-6"	8'-0"	18-#8	4'-0"	9'-0"	18-#9	4'-6"	10'-0"	18-#10	5'-0"	9'-0"	23-#10
WET SAND	3'-6"	8'-0"	18-#8	4'-0"	10'-0"	18-#9	4'-6"	11'-0"	18-#10	5'-0"	10'-0"	23-#10
CLAY (MEDIUM STIFF)	3'-6"	12'-0"	18-#8	4'-0"	14'-0"	18-#9	4'-6"	15'-0"	18-#10	5'-0"	16'-0"	23-#10
ALLUVIAL	3'-6"	10'-0"	18-#8	4'-0"	11'-0"	18-#9	4'-6"	12'-0"	18-#10	5'-0"	12'-0"	23-#10

			PI	ER FOUN	DATIONS F	OR 130 M	PH WIND	SPEED Z	ONE			
					LIGH	IT LOADING	CONDITIC	NS				
	15'	& 20' MAST	ARMS	25	'& 30' MAST	ARMS	35	' & 40' MAST	ARMS	and the plant of the state of t	45' MAST AR	MS
SOIL TYPE	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'-6"	7'-0"	18-#8	3'-6"	9'-0"	18-#8	3'-6"	10'-0"	18-#8	3'-6'	10'-0"	18-#8
WET SAND	3'-6"	8'-0"	18-#8	3'6"	10'-0"	18-#8	3'-6"	11'-0"	18-#8	3'–6 "	11'-0"	18-#8
CLAY (MEDIUM STIFF)	3'-6"	12'-0"	18-#8	3'-6"	13'-0"	18-#8	3'-6"	13'-0"	18-#8	3'-6"	13'-0"	18-#8
ALLUVIAL	3'-6"	9'-0"	18-#8	3'-6"	12'-0"	18-#8	3'-6"	12'-0"	18-#8	3'-6"	13'-0"	18-#8
					MEDIL	JM LOADING	G CONDITI	ONS				
	15'	& 20' MAST	ARMS	25	' & 30' MAST	ARMS	35	' & 40' MAST	ARMS	·	45' MAST AR	MS
SOIL TYPE	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'-6"	8'-0"	18-#8	3'-6"	10'-0"	18-#8	4'-0"	11'-0"	18-#9	4'-6"	10'-0"	18-#10
WET SAND	3'-6"	8'-0"	18-#8	3'-6"	11'-0"	18-#8	4'-0"	12'-0"	18-#9	4'-6"	11'-0"	18-#10
CLAY (MEDIUM STIFF)	3'6"	12'-0"	18-#8	3'-6"	14'-0"	18-#8	4'-0"	15'-0"	18-#9	4'-6"	15'-0"	18-#10
ALLUVIAL	3'-6"	10'-0"	18-#8	3'-6"	13'-0"	18-#8	4'-0"	13'-0"	18-#9	4'-6"	12'-0"	18-#10
					HEAV	Y LOADING	CONDITIO	DNS				
	15'	& 20' MAST	ARMS	25	'& 30' MAST	ARMS	35	'& 40' MAST	ARMS		45' MAST AR	MS
SOIL TYPE	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'-6"	9'-0"	18-#8	4'-0"	11'-0"	18-#9	4'-6"	12'-0"	18-#10	5'-0"	11'-0"	23-#10
WET SAND	3'-6"	10'-0"	18-#8	4'-0"	12'-0"	18-#9	4'-6"	13'-0"	18-#10	5'-0 "	12'-0"	23-#10
CLAY (MEDIUM STIFF)	3'-6"	14'-0"	18-#8	4'-0"	15'-0"	18-#9	4'-6"	16'-0"	18-#10	5 ' -0 "	17'-0"	23-#10
ALLUVIAL	3'-6"	11'-0"	18-#8	4'-0"	13'-0"	18-#9	4'-6"	15'-0"	18-#10	5'-0"	14'-0"	23-#10

NOTEC.

- 1. FOUNDATIONS SHALL BE 4000 PSI, 1½", 565 CEMENT CONCRETE.
- 2. REINFORCEMENT SHALL BE ASTM A615 GRADE 60.
- 3. ANCHOR BOLTS SHALL BE SET BY TEMPLATE.
- 4. PROVIDE FOR ELECTRICAL CONDUIT.
- 5. EXCAVATION SHALL BE BY THE AUGER METHOD TO THE NEAT LINES OF THE OUTSIDE DIMENSION OF THE FOUNDATIONS WITHOUT DISTURBING THE SOIL AROUND AND BELOW THE PROPOSED FOUNDATION BOTTOM. ALTERNATE METHODS OF EXCAVATION MAY BE SUBMITTED TO MASSHIGHWAY FOR APPROVAL IF THEY MEET THE REQUIREMENTS LISTED IN NOTES 6, 7, AND 8.
- 6. THE EARTH WALLS OF THE FOUNDATION SHALL BE ADEQUATELY AND SECURELY PROTECTED AT ALL TIMES AGAINST CAVE—INS, DISPLACEMENT OF THE SURROUNDING EARTH AND FOR THE EXCLUSION OF GROUND WATER. THIS MAY BE DONE BY THE USE OF STEEL CYLINDER LINERS OR CASINGS THAT ARE APPROVED BY MASSHIGHWAY. IF LINERS ARE USED THEY MAY BE RECLAIMED PROVIDED THAT THEY ARE WITHDRAWN AS THE CONCRETE IS BEING PLACED, MAINTAINING A SUFFICIENT HEAD OF CONCRETE WITHIN THE LINER TO PREVENT REDUCTION IN THE FOUNDATION DIAMETER AND TO PREVENT EXTRANEOUS MATERIAL FROM FALLING IN FROM THE SIDES AND MIXING WITH THE CONCRETE.
- 7. IF THE SOIL IS DISTURBED OR REMOVED BEYOND THE NEAT LINES OF THE OUTSIDE DIMENSION OF THE FOUNDATION, IT SHALL BE REPLACED WITH CONCRETE. ANY ADDITIONAL COST FOR THE CONCRETE SHALL BE PAID FOR BY THE CONTRACTOR.
- B. SPECIAL CARE SHOULD BE GIVEN TO AREAS WHERE WET SOIL IS ENCOUNTERED, TO INSURE THAT THE PREAUGERED HOLE DOES NOT COLLAPSE. THIS MAY REQUIRE THE USE OF STEEL CYLINDER LINERS OR CASINGS TO HOLD THE SOIL IN PLACE UNTIL READY FOR CONCRETE PLACEMENT. THE STEEL CYLINDERS OR CASINGS SHALL BE WITHDRAWN AS THE FOUNDATION CONCRETE IS PLACED.
- 9. DETERMINATION OF EXISTING SOIL CONDITIONS SHALL BE MADE BY THE DESIGN ENGINEER.
- 10. IF LEDGE OR POOR SOIL IS ENCOUNTERED (i.e. ONE WHICH DOES NOT APPLY TO THE DESIGN TABLES SHOWN ON THIS SHEET), AN ALTERNATIVE DESIGN SHALL BE PROVIDED BY THE DESIGN ENGINEER.
 DECISIONS MADE IN NOTES 8 AND 9 SHALL BE SUBMITTED TO MASSHIGHWAY FOR APPROVAL. IF UTILITIES OR OTHER UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL BACKFILL
 THE AREA TO ITS ORIGINAL CONDITION UNTIL AN ALTERNATE DESIGN HAS BEEN PROVIDED BY THE ENGINEER.

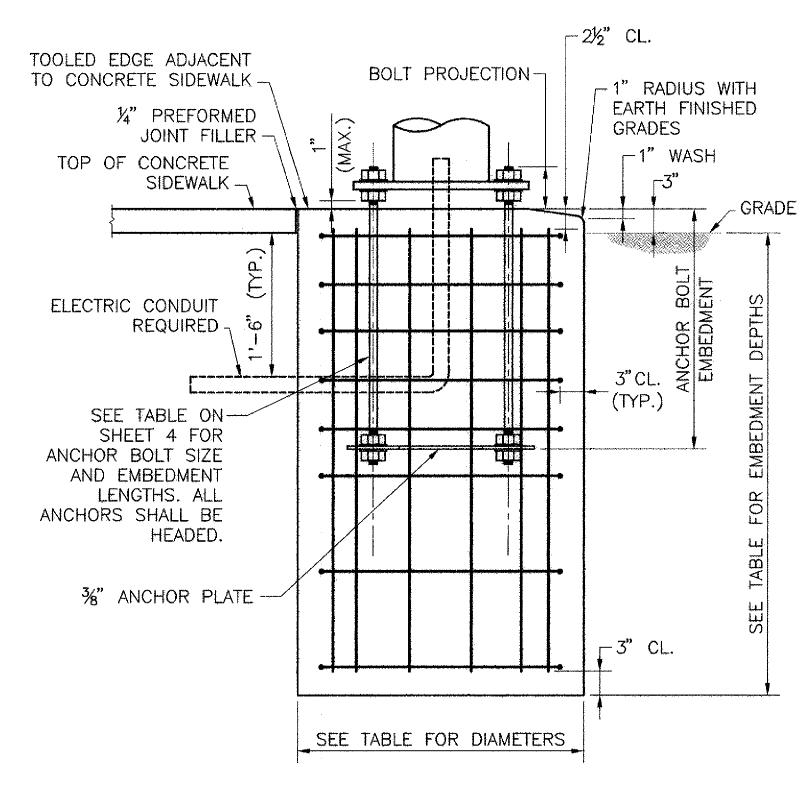
ARLINGTON MASSACHUSETTS AVENUE - ROUTE 2A/3

STATE FED. AID PROJ. NO. SHEET NO. SHEETS

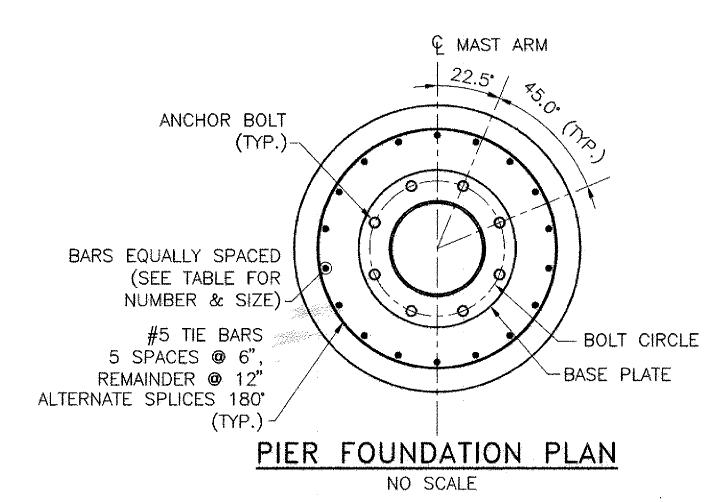
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PROJECT FILE NO. 604687

TRAFFIC SIGNAL DETAILS
TYPE II MAST ARMS
FOUNDATIONS



PIER FOUNDATION DETAIL NO SCALE



MONTH_DD,_YYYY | ISSUED FOR CONSTRUCTION

Moving Massachusetts Forward.

B Highway.

STANDARD DRAWINGS

TYPE II MAST ARMS

CORED PIER FOUNDATIONS

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

BRIDGE ENGINEER TRAFFIC ENGINEER

SHEET 5 OF 5 SHEETS

ARLINGTON

MASSACHUSETTS AVENUE - ROUTE 2A/3

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AIE	FED. AID PROJ. NO.	NO.	SHEET
ASS.		88	164
	PROJECT FILE NO. 60)4687	

TEMPORARY TRAFFIC CONTROL PLAN **PART 1 OF 4**

GENERAL NOTES

- 1. CONTRACTOR WILL PERFORM WORK AFFECTING THE TRAVELING PUBLIC ONLY BETWEEN 9:00 AM AND 3:00 PM. ALL PAVEMENT EDGES SHALL BE SLOPED, WITH NO SHARP DROP OFFS.
- 2. NO WORK AFFECTING THE TRAVELING PUBLIC SHALL BE DONE BETWEEN THE DATES OF NOVEMBER 15 AND JANUARY 15. ALL LANES AND SIDEWALKS MUST BE OPEN TO TRAFFIC AND PEDESTRIANS DURING THIS TIME.
- 3. ACCESS TO ALL INTERSECTING STREETS AND BUSINESSES, DRIVEWAYS, AND WALKWAYS SHALL BE MAINTAINED AT ALL TIMES DURING ALL PHASES OF CONSTRUCTION, EXCEPT DURING SUCH LIMITED TIMES AS INDICATED IN NOTE 4 BELOW.
- 4. CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 48 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING ROADWAY, DRIVEWAY OR SIDEWALK EXCAVATION, TEMPORARY OR PERMANENT DRIVEWAY PAVEMENT PLACEMENT, WALKWAY RECONSTRUCTION AND SIMILAR OPERATIONS.
- 5. THE CONTRACTOR SHALL PROVIDE SAFE AND READY MEANS OF INGRESS AND EGRESS TO ALL STORES AND SHOPS, PUBLIC AND PRIVATE AND PROFESSIONAL OFFICES AND ANY OTHER BUSINESSES OR RESIDENCES IN THE PROJECT AREA, BOTH DAY AND NIGHT, FOR THE DURATION OF THE PROJECT.

PHASE I — SIDEWALK RECONSTRUCTION, CURBING, AND DRAINAGE:

- 1. CONSTRUCT SIDEWALK, RESET/INSTALL CURBING, AND INSTALL DRAINAGE STRUCTURES WITHIN WORKZONE.
- 2. WHERE THE WORK IS OCCURRING, CURBSIDE PARKING MUST BE MAINTAINED ON AT LEAST ONE SIDE OF ROADWAY AT ALL TIMES. NO CURB OR DRAINAGE WORK MAY BE PERFORMED SIMULTANEOUSLY ON DIRECTLY OPPOSITE SIDES OF THE ROADWAY.
- 3. SEE TRAFFIC MANAGEMENT DETAILS, SHEET NOS. 89 AND 90.

PHASE II - MEDIAN CONSTRUCTION:

- 1. CONSTRUCT MEDIANS (INSTALL CURBING OR EDGING AS REQUIRED) WITHIN WORKZONE.
- 2. SEE DETAIL FOR INTERIOR LANE CLOSURE, SHEET NO. 89.

PHASE III - MILLING AND PAVING:

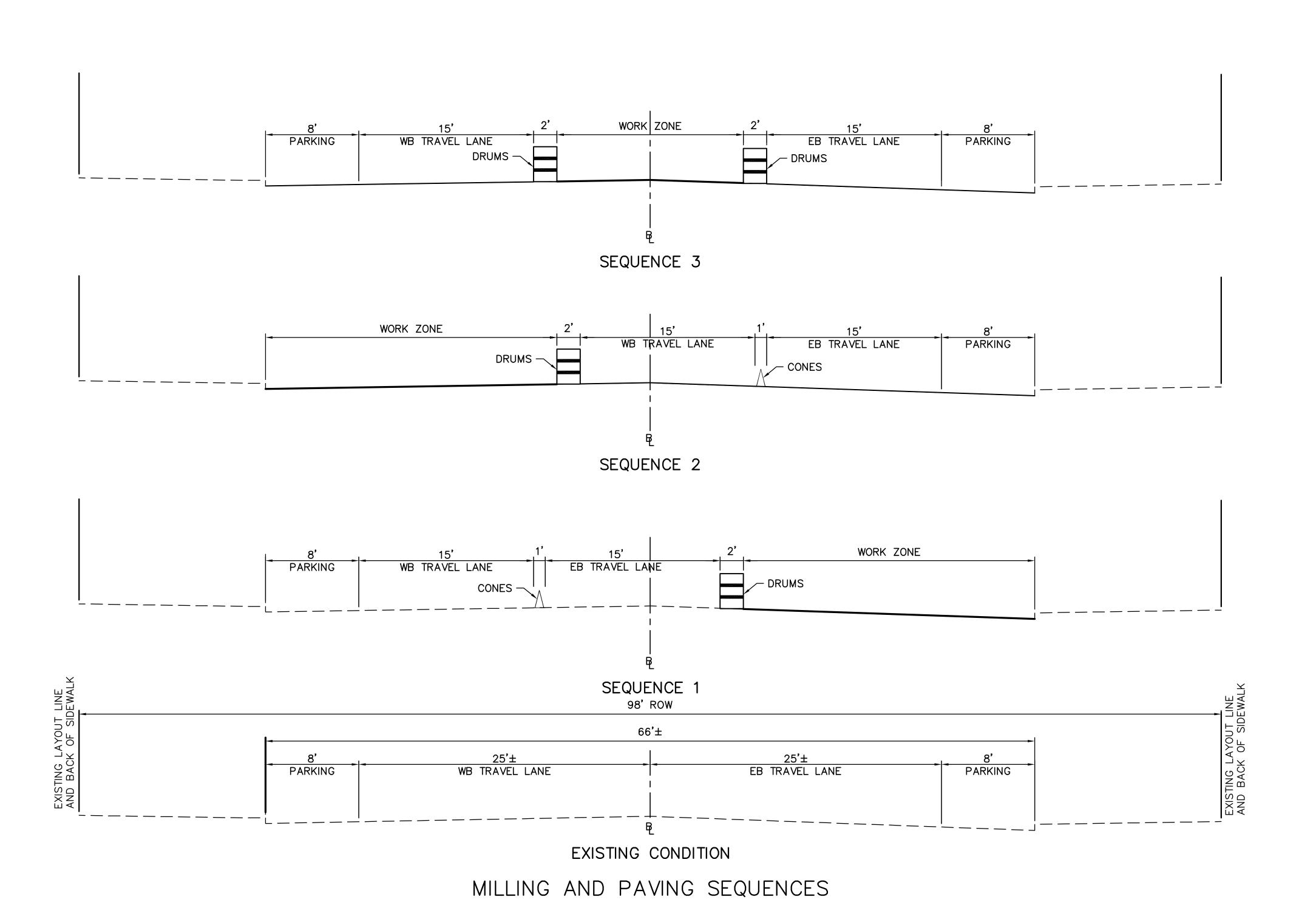
- 1. MILL AND OVERLAY PAVEMENT WITHIN WORKZONES AS SHOWN ON THIS SHEET AND AS REQUIRED BY THE ENGINEER.
- 2. MILLING AND PAVING OPERATIONS SHALL BE DONE IN SUBPHASES OF NO LONGER THAN 1500 FEET IN LENGTH. NO SUBPHASE SHALL TERMINATE WITHIN AN INTERSECTION.
- 3. OPERATIONS IN EACH SUBPHASE SHALL FOLLOW SEQUENCES 1, 2, AND 3 SHOWN ON THIS SHEET. MILLING AND PAVING SHALL TAKE PLACE OUTSIDE MORNING OR EVENING PEAK TRAVEL HOURS. (9:00 AM - 3:00 PM).

PHASE IV - PAVEMENT MARKINGS:

1. APPLY PERMANENT PAVEMENT MARKINGS THROUGHOUT THE PROJECT.

PHASE V - FINAL LANDSCAPING AND CLEAN-UP:

- 1. INSTALL FINAL LANDSCAPING, REPAIR AND REPLACE LANDSCAPING THAT HAS BEEN DAMAGED OR HAS NOT ESTABLISHED PROPERLY.
- 2. RE-SEED ANY LAWN AREAS AS DIRECTED BY THE ENGINEER.
- 3. CLEANUP OF PROJECT SITE.



FS&T DWG. NO. QA-013 AED CHK JMM

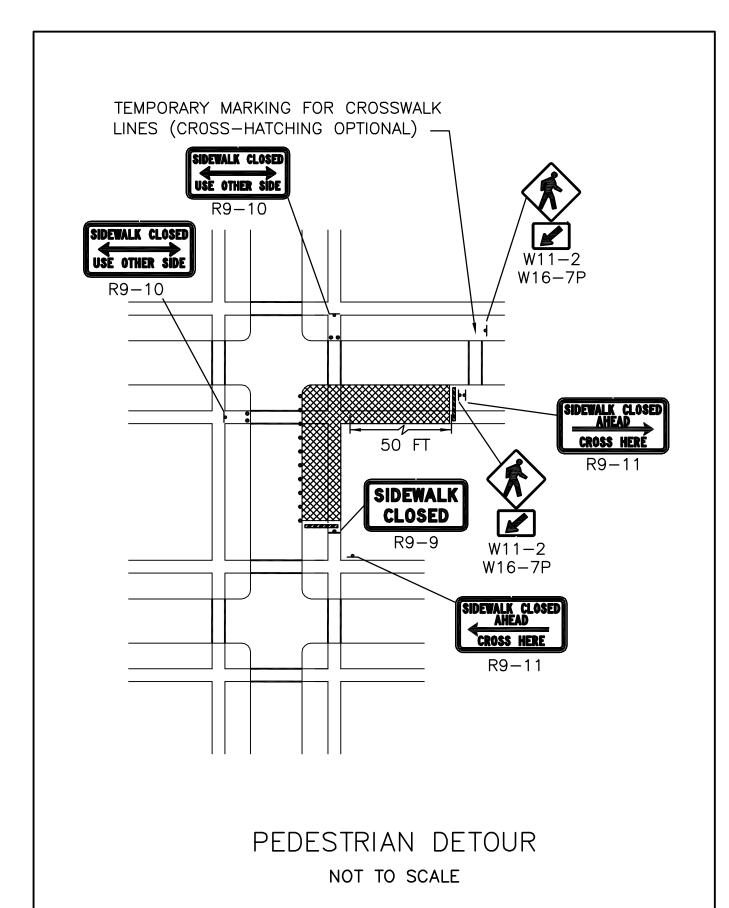
ENGINEER IN CHARGE

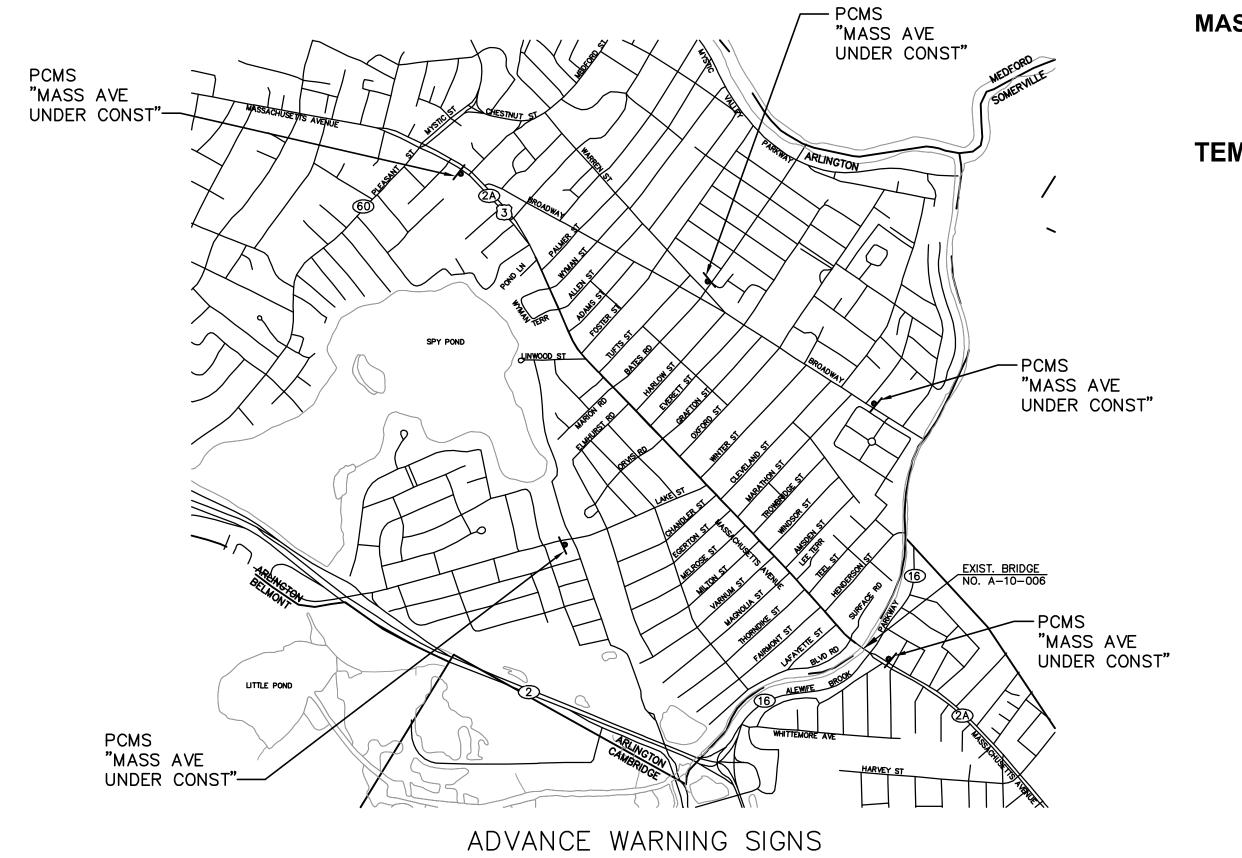
SCALE IN FEET

[martin_ja] - February 28, 2012 - 11:17am - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic_TTCP_Details.dwg [TTCP PART 1]

NOTES:

- 1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
- 2. ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- 3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- 4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- 5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED PLASTIC DRUMS WITH MOUNTED LIGHTING DEVICES, MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES."
- 6. THE FIRST THREE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
- 7. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- 8. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- 9. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- 10. MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- 11. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- 12. CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESSES/RESIDENTS AT ALL TIMES DURING CONSTRUCTION





NOT TO SCALE

ARLINGTON **MASSACHUSETTS AVENUE - ROUTE 2A/3** STATE | FED. AID PROJ. NO.

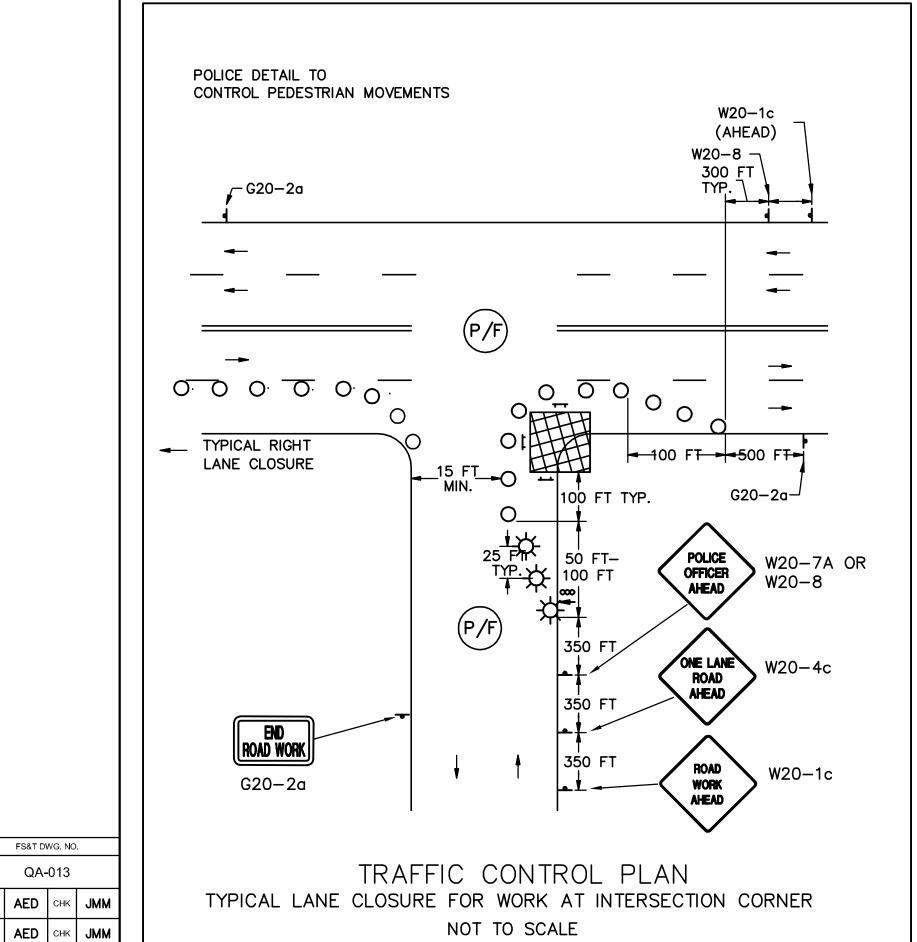
MASS. 89 PROJECT FILE NO. 604687

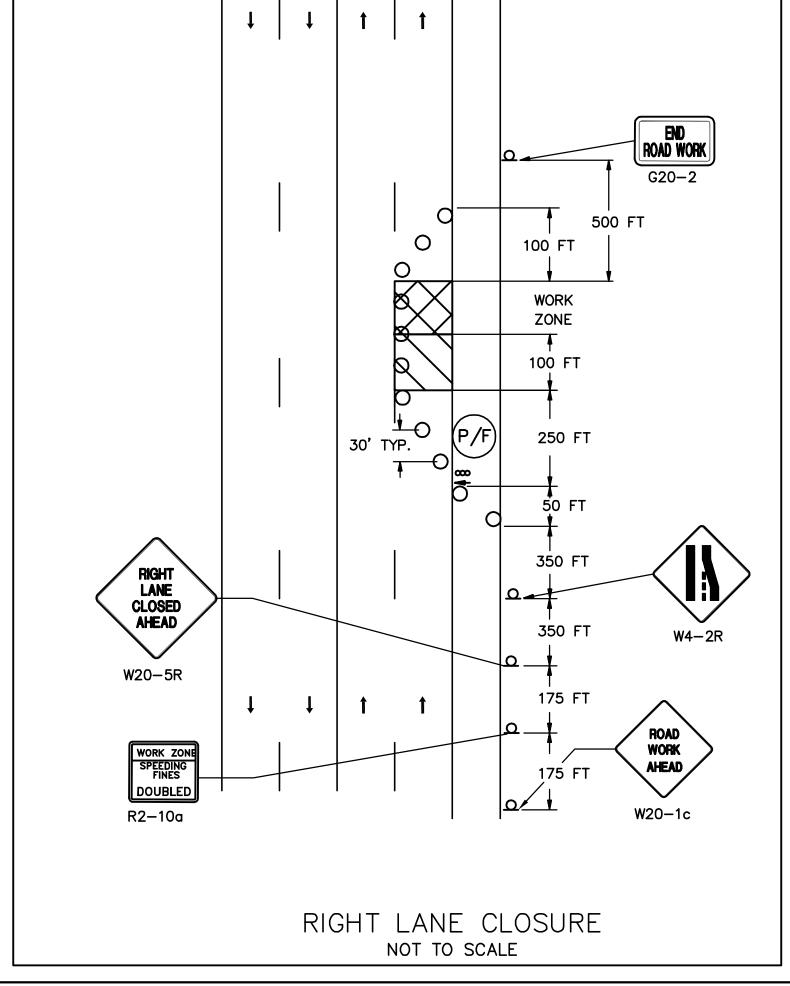
TEMPORARY TRAFFIC CONTROL PLAN **PART 2 OF 4**

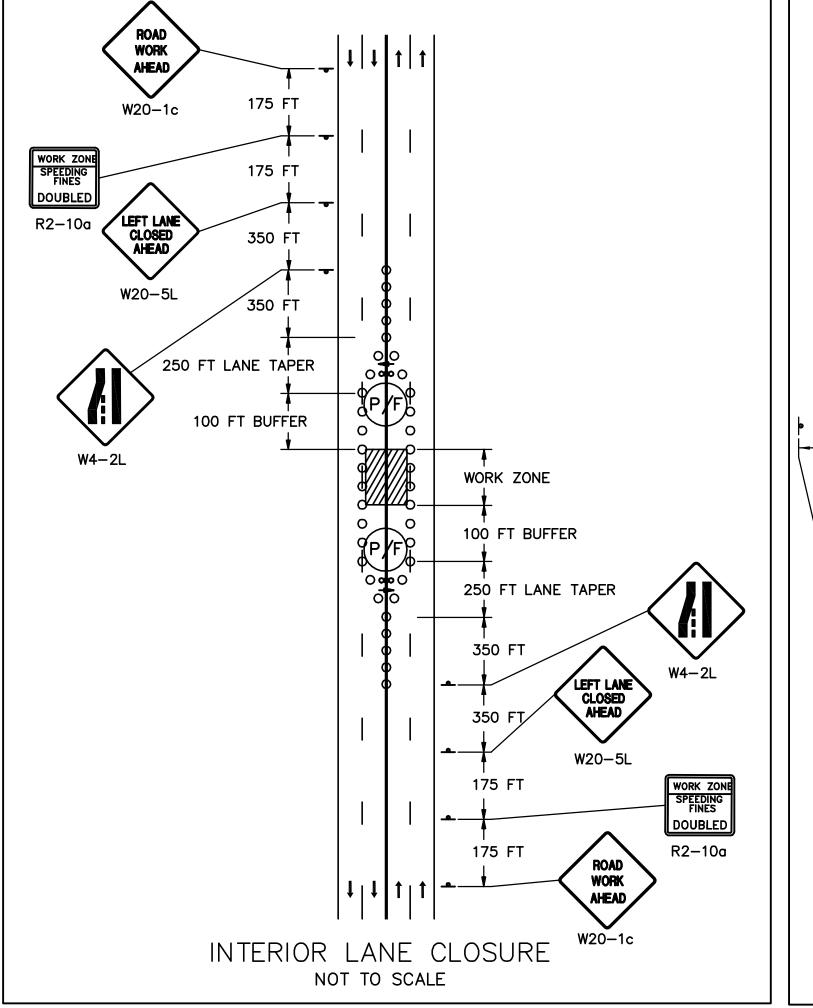
<u>LEGEND</u>

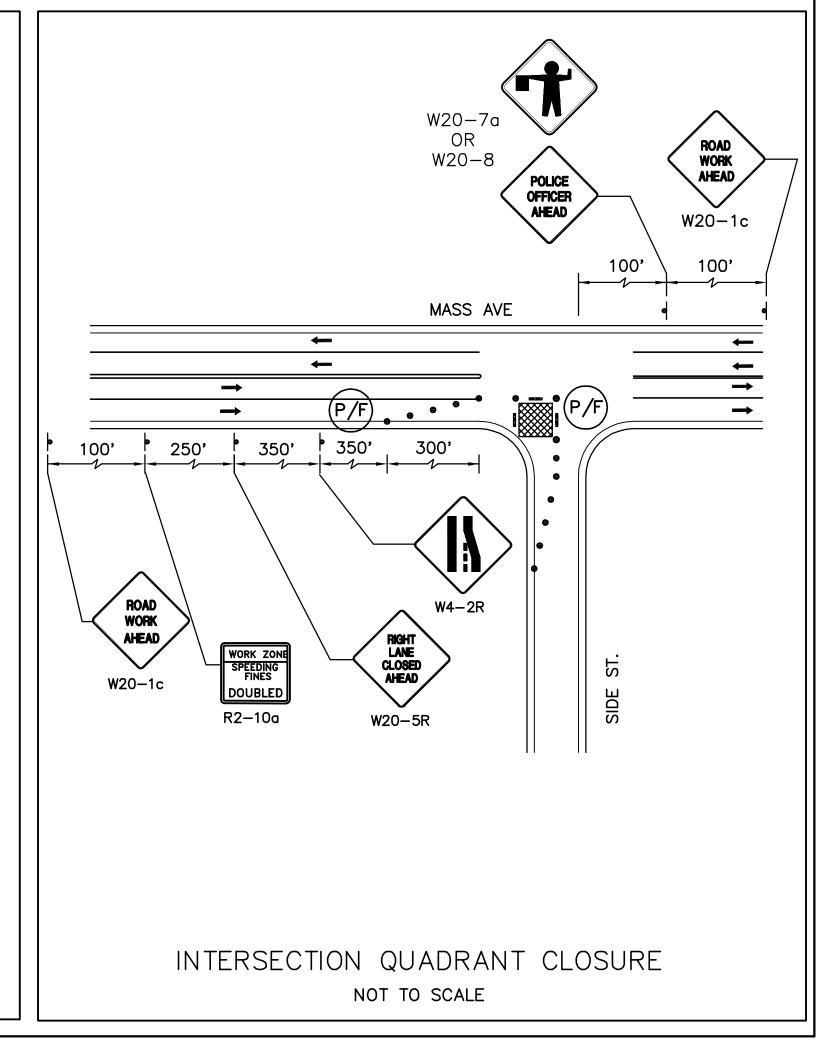
- REFLECTORIZED DRUM
- REFLECTORIZED DRUM WITH TYPE A (FLASHING) LIGHT
- CONSTRUCTION SIGN
- TYPE III BARRICADE
- WORK ZONE
- (P/F) POLICE OFFICER/FLAGGER
- → DIRECTION OF TRAFFIC
- TEMPORARY CONCRETE BARRIER

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL PROPOSED PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) IN THE FIELD SUCH THAT VEHICULAR ABD PEDESTRIAN TRAFFÍC IS NOT IMPEDED. LOCATION OF PCMS UNITS ON PRIVATE PROPERTY SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE OWNER.









FS&T DWG. NO.

QA-013

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ARLINGTON **MASSACHUSETTS AVENUE - ROUTE 2A/3** NOTES: STATE FED. AID PROJ. NO. SHEETS NO. SHEETS 1. CONTRACTOR SHALL LIMIT FULL DEPTH SIDEWALK CONSTRUCTION, OR ANY WORK THAT INVOLVES EXCAVATION WITHIN OR ADJACENT TO SIDEWALKS, TO ONE STREET BLOCK ON EACH SIDE OF THE STREET. PROJECT FILE NO. 604687 2. CONTRACTOR SHALL ONLY OCCUPY THE CURBSIDE PARKING LANE ON ONE TEMPORARY TRAFFIC CONTROL PLAN SIDE OF THE STREET IN THE BLOCK WHERE WORK IS OCCURING. PART 3 OF 4 3. NO SIDEWALK OR UTILITY WORK SHALL BE PERFORMED ON BOTH SIDES OF THE STREET SIMULTANEOUSLY WITHIN THE BLOCK WHERE WORK IS OCCURING. 4. CONCRETE BARRIERS SHALL BE INSTALLED TO PROTECT PEDESTRIANS WHEN THE TEMPORARY PEDESTRIAN PATH IS TO BE LOCATED WITHIN THE ROADWAY FOR MORE THAN ONE DAY (OR TO REMAIN IN PLACE <u>LEGEND</u> OVERNIGHT). REFLECTORIZED DRUM 5. DRUMS AND POLICE OFFICER(S) SHALL BE USED TO GUIDE PEDESTRIANS TO A TEMPORARY PEDESTRIAN PATH WITHIN THE ROADWAY AS SHOWN. REFLECTORIZED DRUM WITH SIDEWALK USE WILL BE RESTORED BEFORE WORK IS COMPLETED FOR THE TYPE A (FLASHING) LIGHT CONSTRUCTION SIGN TYPE III BARRICADE 350' **WORK** WORK ZONE — WORKZONE BARRIER (TYP) – **AHEAD** 1. CONCRETE BARRIÈR TO BE INSTALLED (P/F) POLICE OFFICER/FLAGGER TO PROTECT WORKZONES LEFT IN PLACE NO OVERNIGHT. PARKING PARKING 2. REFLECTORIZED DRUMS TO BE USED FOR W20-1c → DIRECTION OF TRAFFIC ANY TIME — TYPE Ⅲ BARRICADE WORKZONES TO BE USED DAILY AND REMOVED /-- INSTALL DRUMS TO TAPER LANE IN AT THE END OF THE DAY. _ TEMPORARY CONCRETE ADVANCE OF CONCRETE BARRIER (TYP) \longrightarrow BARRIER R7-1R SIDEWALK **CLOSED** — WORK ZONE EXISTING SIDEWALK--PROP CONSTRUCTION FENCE R9-9 (MOUNT ON BARRICADE) \$\frac{1}{5}\$' BUFFER TO WORKZONE 8' MIN PARKING LANE SIDEWALK 15' MIN WIDTH PEDESTRIAN PATH CLOSED R9-9 (MOUNT 20' TRAVEL LANE ON BARRICADE) 15' MIN TRAVEL LANE → TYPE III BARRICADE 15' MIN TRAVEL LANE 20' TRAVEL LANE SIDEWALK R9-9 (MOUNT ON BARRICADE) 5' MIN WIDTH PEDESTRIAN PATH

90

PEDESTRIAN BYPASS SCALE: 1" = 20'

SIDEWALK

CLOSED

350'

R9-9 (MOUNT ON BARRICADE) 5' BUFFER TO WORKZONE

─ WORK ZONE

EXISTING SIDEWALK-

50' MIN SHIFTING TAPER

DRUMS SPACED AT 10' O.C. (TYP)

ENGINEER IN CHARGE

8' MIN PARKING LANE

AHEAD

W20-1c

STATE FED. AID PROJ. NO. SHEET TOTAL NO. SHEETS

PROJECT FILE NO. 604687

TEMPORARY TRAFFIC CONTROL PLAN PART 4 OF 4

NOTE: SUPER HIGH INTENSITY UNMETALIZED MICROPRISMATIC ELEMENT REFLECTIVE SHEETING M9.30.0 TYPE VII, VIII, IX, OR X SHALL BE USED FOR ALL SIGNS.

CONSTRUCTION SIGN SUMMARY

IDENTIFI-	SIZE C	F SIGN	TEVT		TEXT	DIMENS	IONS		NUMBER OF			CO	LOR			POST SIZE AND	AREA IN
CATION NUMBER	WIDTH	HEIGHT	TEXT	LET'	TER V	ERTICAL PACING	ARRO	WC	SIGNS REQUIRED	BAC GRO	K- UND	LEG	END	BOR	DER	NUMBER REQUIRED	
G20-2	36"	18"	END ROAD WORK	SEE	MASS	DOT ST	ANDARI	os	8	SEE	E MAS	 SSDO ⁻ 	ΓSTA	 NDAR	DS		36.00
R2-10a	48"	36"	WORK ZONE SPEEDING FINES DOUBLED	•		V			2	ļ		,					24.00
R7–1R	12"	18"	NO / NO PARKING	0.5		OD OT4			4	0.5		l Top	OT 11				6.00
R7–1L	12"	18"	ANY TIME ANY TIME	SE	.E MUT	CD STA	NDARDS	Š	4	St	LE MU		SIAN	IDARD 	S		6.00
R9-9	30"	18"	SIDEWALK CLOSED	SEE	MASS	DOT ST	ANDARI	os	8	SEE	E MAS	SSDO ⁻	Γ STA	NDAR	DS		30.00
R9-10	48"	24"	SIDEWALK CLOSED USE OTHER SIDE						8								64.00
R9-11R	48"	24"	SIDEWALK CLOSED AHEAD AHEAD						4								32.00
R9-11L	48"	24"	CROSS HERE CROSS HERE						4								32.00
W4-2L	36"	36"							1								9.00
W4-2R	36"	36"							1								9.00
W11-2	30"	30"							4								25.00
W16-7P	24"	12"							4								8.00
W20-1c	36"	36"	ROAD WORK AHEAD						8								72.00
W20-4c	36"	36"	ONE LANE ROAD AHEAD						2								18.00
W20-5cR	36"	36"	RIGHT LANE CLOSED LEFT LANE CLOSED						1								9.00
W20-5cL	36"	36"	RIGHT LANE CLOSED AHEAD AHEAD						1								9.00
W20-7a	36"	36"							4								36.00
W20-8	36"	36"	POLICE OFFICER AHEAD						4	,	,				,		36.00

IDENTIFI-	SIZE C	F SIGN	TEVT	TEX	T DIMENSIO	ONS	NUMBER OF		COLOR		POST SIZE AND	AREA IN
CATION NUMBER	WIDTH	HEIGHT	TEXT	LETTER HEIGHT	VERTICAL SPACING	ARROW	SIGNS REQUIRED	BACK- GROUND	LEGEND	BORDER	POST SIZE AND NUMBER REQUIRED	AREA IN SQUARE FEET

FS&T DWG. NO.

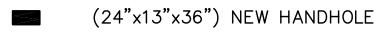
[martin_ja] - February 28, 2012 - 11:17am - T:\QA-013 Mass Ave_Arlington\Drawings\QA-013_Traffic_Sign_Summary.dwg [Con Sign Sum]

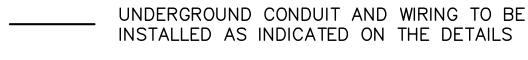
LIGHTING LEGEND

11 FOOT POLE MOUNTED ACORN LUMINAIRE

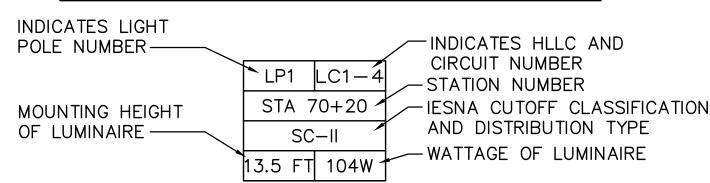


HIGHWAY LIGHTING LOAD CENTER





LUMINAIRE INFORMATION BOX



ABBREVIATIONS

AMPERE (ABAN) ABANDON AMERICAN WIRE GAUGE CONDUIT DIAMETER DIA ELEC. ELECTRIC **EMH** ELECTRIC MANHOLE FULL CUTOFF FT FOOT GROUND GROUND FAULT CIRCUIT INTERRUPTER **GFCI** HIGHWAY LIGHTING LOAD CENTER LIGHTING CIRCUIT ΙP LIGHT POLE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION MINIMUM ORANGE OD OUTER DIAMETER O.C. ON CENTER POLE PVC POLYVINYL CHLORIDE RM RIGID METAL **RGS** RIGID GALVANIZED STEEL R&D REMOVE AND DISPOSE

SEMI-CUTOFF DISTRIBUTION

SINGLE POLE DOUBLE THROW

UNDERWRITERS LABORATORIES

SCHEDULE

WATT / WHITE

TYPICAL

VOLT

WITH

SPD1

TYP.

- CONDUIT RUNS ARE SHOWN APPROXIMATE. LOCATIONS MAY BE ADJUSTED TO MATCH EXISTING AND PROPOSED CONDITIONS AS REQUIRED BY THE RESIDENT ENGINEER.
- THE CONTRACTOR SHALL VISIT THE JOB SITE WITH THE CONTRACT DOCUMENTS AND INVESTIGATE ALL CONDITIONS AFFECTING THIS WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE LOCATION AND SITE OF THE WORK, AND SHALL VERIFY DIMENSIONS, QUANTITIES, ACTUAL INSTALLATION CONDITIONS, CONFLICTS, AND STORAGE FACILITIES.
- STATIONING FOR POLES IS GIVEN FROM THE BASELINE CLOSEST TO THE POLE. OFFSET DISTANCE FROM STREET IS DEFINED ON LIGHT POLE FOUNDATION DETAIL
- ALL WIRING IN THE PANELBOARDS AND CABINETS SHALL BE PERMANENTLY LABELED AND NEATLY INSTALLED.
- 5. ALL CONDUIT AND EQUIPMENT TO BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, MASSACHUSETTS ELECTRICAL CODE AND APPLICABLE LOCAL CODES.
- 6. ALL EQUIPMENT AND MATERIALS SHALL BE UL LISTED FOR ITS INTENDED PURPOSE.
- 7. WIRE SIZES SHALL BE BASED ON AMERICAN WIRE GAGE (AWG), AS APPLIED TO COPPER CONDUCTORS. THE CONDUCTOR INSULATION SHALL BE TYPE USE-2 OR RHH-RHW-2.
- WIRE AND CABLE FURNISHED AND USED SHALL BE NEW. WIRE AND CABLE SHALL BE PROTECTED FROM WEATHER AND DAMAGE DURING STORAGE AND HANDLING.
- NO WIRE SHALL BE DRAWN IN TO ANY CONDUIT UNTIL ALL WORK WHICH MAY CAUSE CABLE DAMAGE IS COMPLETE.
- 10. THE CONTRACTOR SHALL CAREFULLY MARK THE PROPOSED LOCATION OF THE CONCRETE FOUNDATION AND THEN SHALL DETERMINE IF ANY UTILITIES. OR UNDERGROUND OR OVERHEAD OBSTRUCTION WILL PREVENT THE INSTALLATION AT THIS LOCATION. SIMILAR MARKING SHALL BE DONE FOR THE CONDUIT RUNS TO THE FOUNDATION. IF SUCH AN OBSTRUCTION IS EVIDENT, THE CONTRACTOR SHALL REQUEST PERMISSION FROM THE ENGINEER TO MOVE OR ADJUST THE LOCATION OF THE FOUNDATION.
- 11. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH OR INCONVENIENCE TO BUSINESS CONCERNS OR ABUTTERS ON ACCOUNT OF THE CONSTRUCTION WORK IS KEPT TO A MINIMUM. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE ACCESS TO AND EGRESS FROM ABUTTING PROPERTIES AT ALL TIMES.
- 12. THE CONTRACTOR SHALL BE REQUIRED TO ADHERE TO ALL REGULATIONS IMPOSED BY THE TOWN OF ARLINGTON.
- 13. ELECTRICAL SERVICE TO EACH HIGHWAY LIGHTING LOAD CENTER (HLLC) WILL BE PROVIDED BY NSTAR. CONTRACTOR SHALL PROVIDE CONDUIT AND WIRE UP POLE WITH ENOUGH SLACK FOR SERVICE CONNECTION. CONTRACTOR SHALL COORDINATE WITH NSTAR FOR SERVICE CONNECTION. CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRIC SERVICE CONNECTIONS AND RELATED FEES FROM NSTAR.
- 14. INSTALL PHOTO ELECTRIC SWITCH IN HLLC.
- 15. CONDUIT SHALL BE SCH. 40 WITH METALLIC DETECTABLE CAUTION TAPE ABOVE. UNLESS OTHERWISE NOTED, CONDUIT SHALL BE AS FOLLOWS:
 - 3" PVC CONDUIT FROM LIGHTING LOAD CENTER TO NSTAR

SERVICE CONNECTION.

2" PVC CONDUIT BETWEEN HANDHOLES

2" PVC CONDUIT BETWEEN HANDHOLE AND LIGHT POLE 2" RGS CONDUIT TRANSITION INTO POLE FOUNDATION

GENERAL NOTES:

- ALL WIRE SHALL BE CONTINUOUS FROM POLE TO POLE WITHOUT RUNNING SPLICES IN CONDUITS. ALL WIRES SHALL EXTEND 24" OUT OF THE POLE PULL BOX. CONNECTED AT ENDS AND ROLLED BACK INTO THE PULL BOX.
- 17. SPLICES SHALL BE IN ACCORDANCE WITH SECTION 813 OF THE MASSHIGHWAY STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- THE HOT LINE AND NEUTRAL CONNECTION IN THE POLE HANDHOLE SHALL BE WITH AN APPROVED STREET LIGHT FUSE CONNECTOR.
- THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE LOCATIONS ARE APPROXIMATE ONLY AND IN SOME CASES MAY BE INCOMPLETE. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES REQUIRED AND VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING FEATURES PRIOR TO PERFORMING ANY WORK.
- WHERE A NEW PAVEMENT SHALL MEET EXISTING PAVEMENT, THE JOINT SHALL BE SAWCUT TO A NEAT VERTICAL LINE.
- 22. THE CONTRACTOR SHALL MAINTAIN AREAS IN AND AROUND THE WORK ZONE FREE AND CLEAR OF DEBRIS AT ALL TIMES. NO STOCKPILING OF EQUIPMENT OR MATERIAL SHALL BE PERMITTED OUTSIDE OF FIXED WORK ZONES.
- THE CONTRACTOR SHALL INSTALL OTHER NECESSARY TEMPORARY REGULATORY AND WARNING SIGNS DURING CONSTRUCTION AS REQUIRED BY THE ENGINEER FOR OTHER INCIDENTAL CONSTRUCTION ACTIVITIES. ALL SIGNAGE AND TRAFFIC CONTROL DEVICES USED MUST CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2003 EDITION AND THE LATEST ADDENDUMS.

ARLINGTON MASSACHUSETTS AVENUE - ROUTE 2A/3

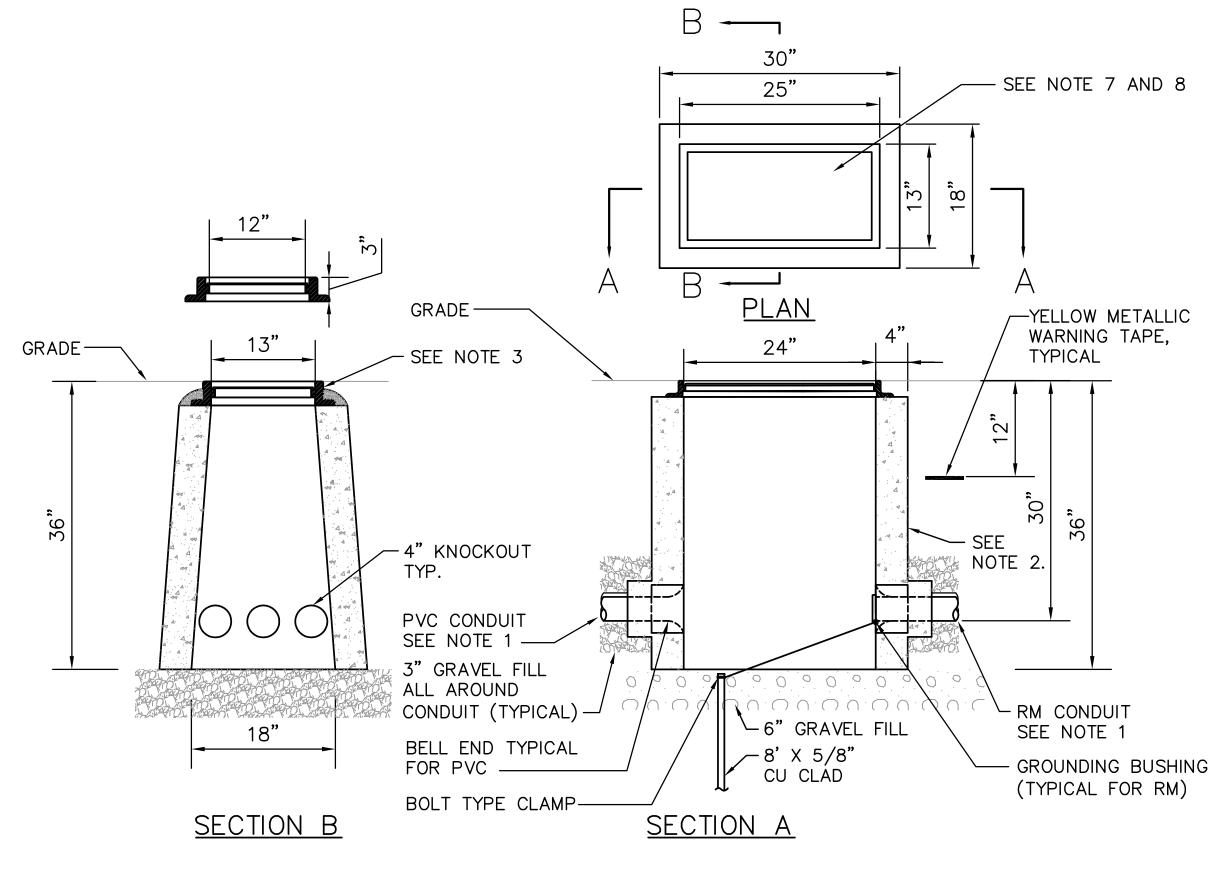
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS						
MASS.		92	164						
	PROJECT FILE NO. 604687								

LIGHTING LEGEND, GENERAL NOTES **AND ABBREVIATIONS**

ELECTRIC HANDHOLE GENERAL NOTES:

- ALL CONDUIT ENTERING HANDHOLES SHALL EXTEND INTO THE HANDHOLE CAVITY BY AT LEAST 2".
- ALL HANDHOLES SHALL BE PRECAST CONCRETE, AND SHALL BE FREE OF CRACKS OR OTHER DEFECTS. CONCRETE FOR PRECAST CONCRETE PULLBOXES/HANDHOLES SHALL BE 4000 PSI, 3/4", 610 CEMENT CONCRETE MASONRY.
- 3. POLYMER CONCRETE FRAME SHALL BE BOLTED TO THE SURFACE OF THE PRECAST CONCRETE HANDHOLE.
- 4. ALL CONDUIT INSTALLED IN HANDHOLES SHALL BE INSTALLED IN KNOCKOUTS PROVIDED IN THE BOX AND NO EXCESS KNOCKOUTS SHALL BE MADE. THE KNOCKOUTS ARE DESIGNED TO BE MADE PRIOR TO BACKFILLING AROUND THE PULLBOXES AND HANDHOLES. AFTER THE CONDUIT HAS BEEN INSTALLED IN THE PULLBOX/HANDHOLE, THE OPEN SPACE BETWEEN THE BOX AND THE CONDUIT WILL BE SEALED WITH 4000 PSI CEMENT CONCRETE MASONRY. ANY CONDUIT INSTALLED IN SUCH A MANNER AS TO BLOCK COMPLETE ACCESS TO ANY OTHER CONDUIT SHALL BE REMOVED AND RESET.
- 5. FOR THE EXACT NUMBER, SIZE, AND ORIENTATION OF THE CONDUITS ENTERING THE HANDHOLE, SEE LIGHTING PLAN SHEETS.
- HANDHOLE FRAME AND COVER TO BE NON-CONDUCTIVE FIBERGLASS REINFORCED POLYMER CONCRETE TYPE. FRAME AND COVER TO BE RATED FOR A STATIC DESIGN LOAD OF 15,000 LB OVER A 10"X10" AREA AND MUST PASS A MINIMUM STATIC TEST LOAD OF 22,568 LB. MINIMUM. FRAME AND COVER SHALL BE RATED ANSI TIER 15 MINIMUM.
- 7. FUNCTION DESIGNATION ON THE HANDHOLE SHALL BE LABELED AS FOLLOWS PER NEC ARTICLE 314.30D:

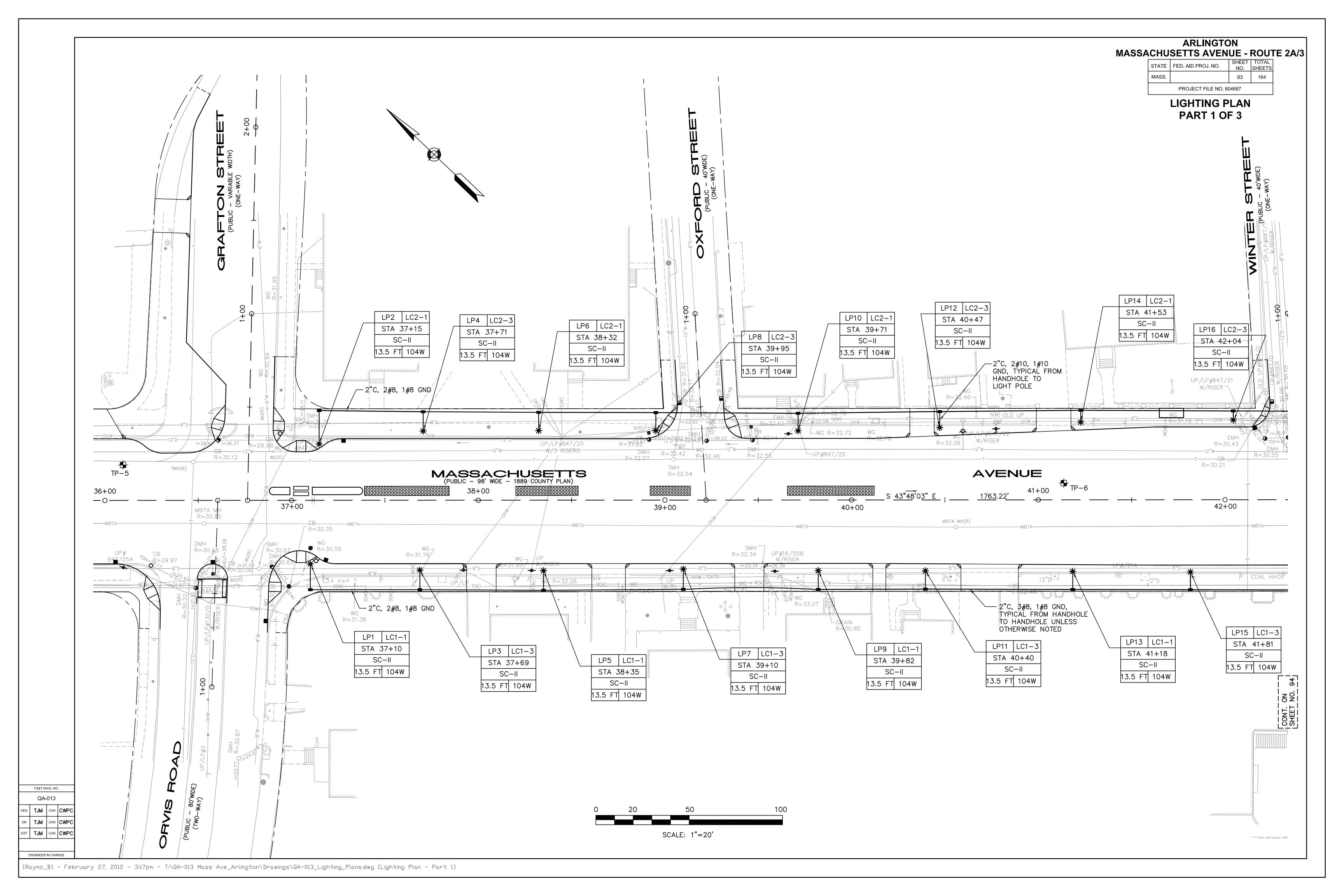
"LIGHTING" FOR LIGHTING CONDUIT.

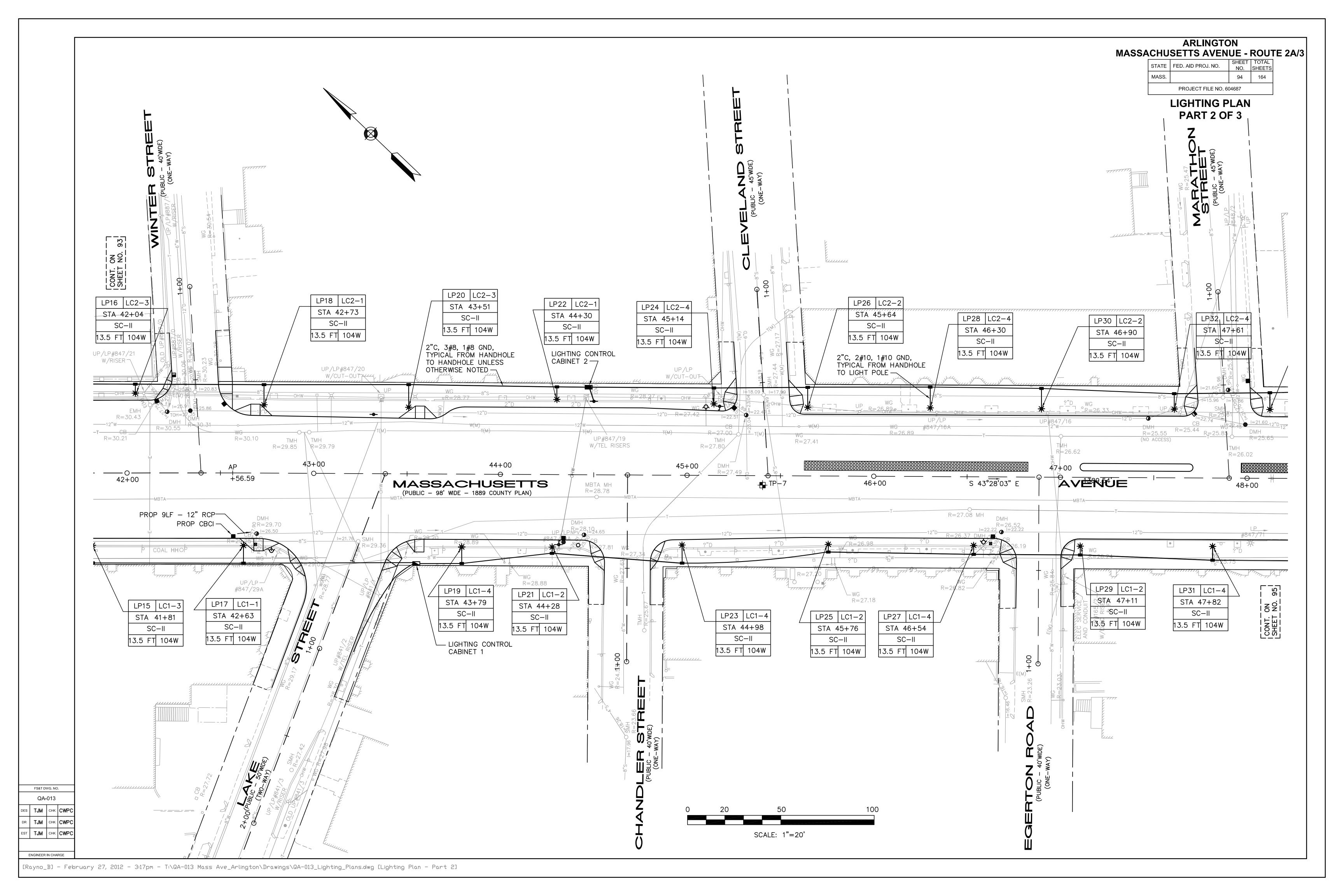


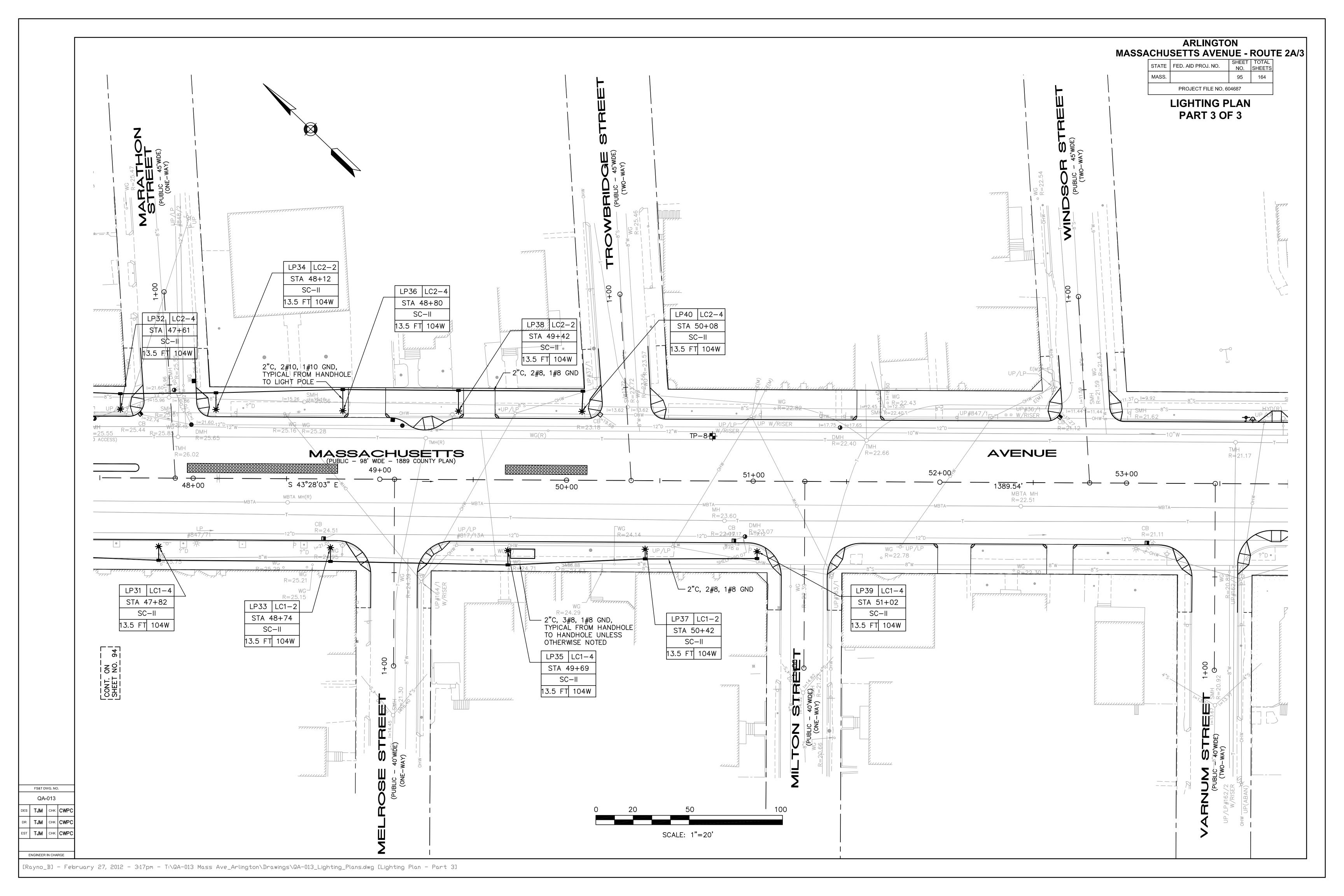
<u>HANDHOLE - 24" x 13" x 36"</u> NOT TO SCALE

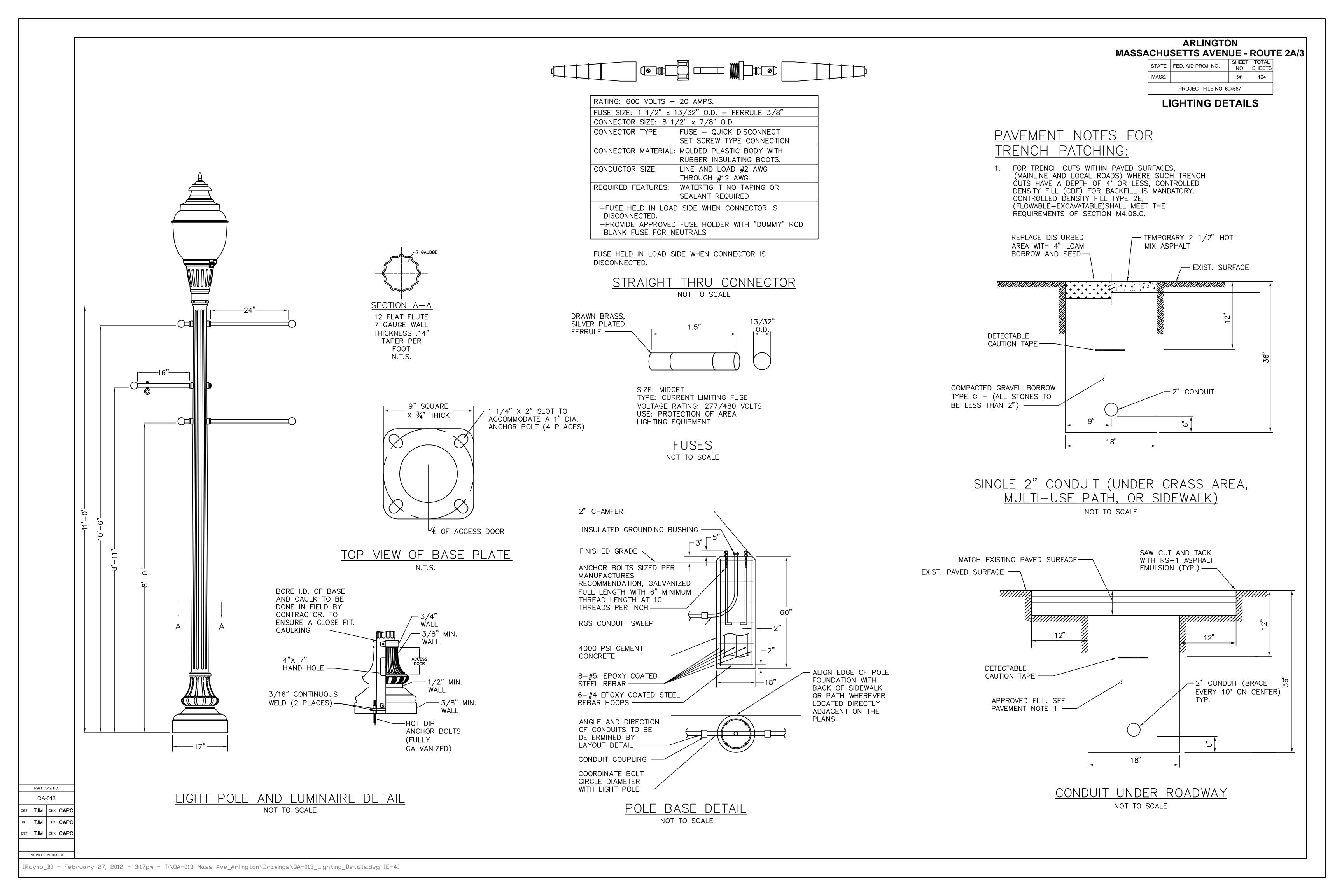
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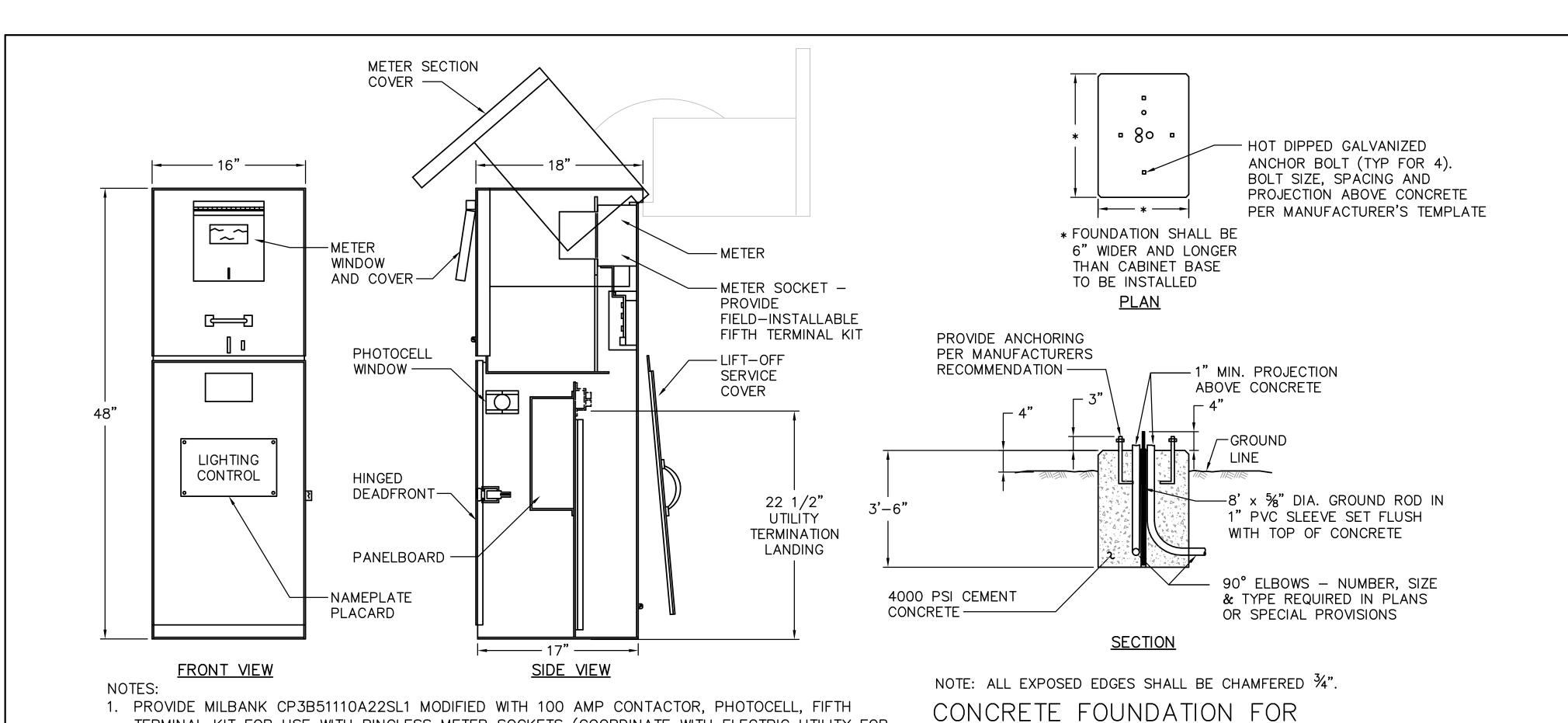
TJM CHK CWPC TJM CHK CWPO











LIGHTING CONTROL CABINET DETAIL

NOT TO SCALE

TERMINAL KIT FOR USE WITH RINGLESS METER SOCKETS (COORDINATE WITH ELECTRIC UTILITY FOR

METER SOCKET REQUIREMENTS), MOUNTING BASE, ANCHOR BOLT KIT, GFCI RECEPTACLE, AND

INTERNAL LIGHT FIXTURE OR ÉQUIVALENT BY MYERS POWER PRODUCTS, OR VIT STRONG BOX.

PANELBOARD LC1 SWITCHED LOADS ONLY SHORT CIRCUIT BRACING: 10-KAIC BUS: 120/240V, 1PH, 3W, 60HZ CABINET: SURFACE MAIN LUGS ONLY: 100A PANEL LOCATION: MASSACHUSETTS AVENUE FEEDER SIZE: 3#2, 1#2-GND GROUND BAR CKT. VA VA NO. A B VA VA CKT. NEUTRAL HP LOAD SERVED LOAD SERVED B NO. LP1, LP5, LP9, LP13, LP17 2 520 520 LP21, LP25, LP29, LP33, LP37 LP3, LP7, LP11, LP15 624 LP19, LP23, LP27, LP31, LP35, LP39 416 3 13 15 ALL BRANCH C/B: 20 AMP TRIP VA B: 1040 VA A: 1040 TOTAL CONNECTED LOAD: 4960 UNLESS OTHERWISE NOTED

LIGHTING CONTROL CABINET

NOT TO SCALE

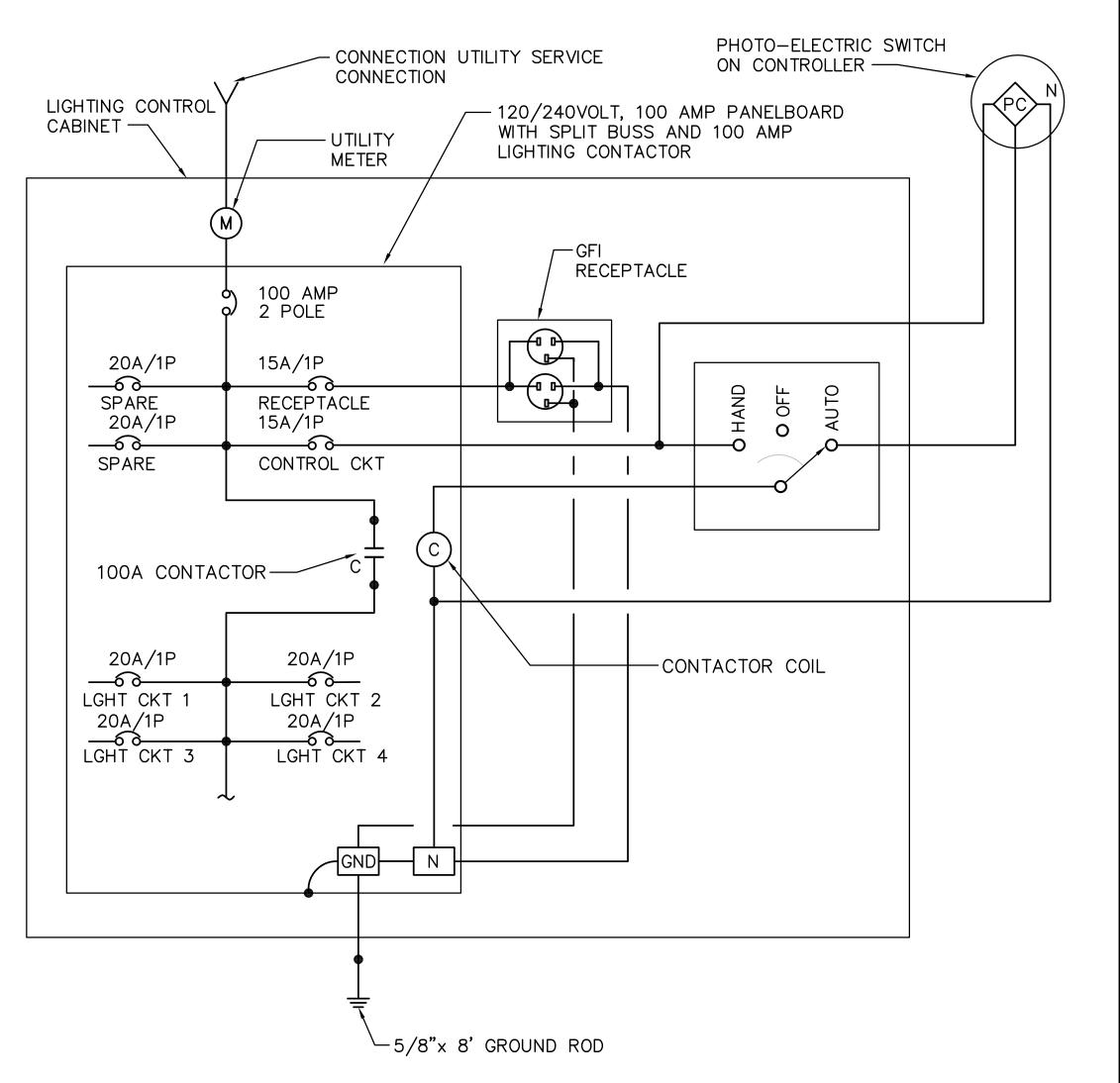
A CKT. NO. 1 — 20 3 — 5 —	NEUTRAL A B 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ò—————————————————————————————————————		VA B 520	HP	LOAD SERVED LP26, LP30, LP34, LP38 LP24, LP28, LP32, LP36, LP40
5 _		6—4		+		
5 _	-60 -60			520		LP24, LP28, LP32, LP36, LP40
		ò 6				
. 7 _						-
1 1	<u> </u>	86		_		_
9 _	-60+60	ò—————————————————————————————————————	_			_
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-	13 -	11 60 6	11	11	11 60 12 - 13 60 14 - 15 60 16 -	11

ARLINGTON
MASSACHUSETTS AVENUE - ROUTE 2A/3

STATE FED. AID PROJ. NO. SHEET NO. SHEETS
MASS. 97 164

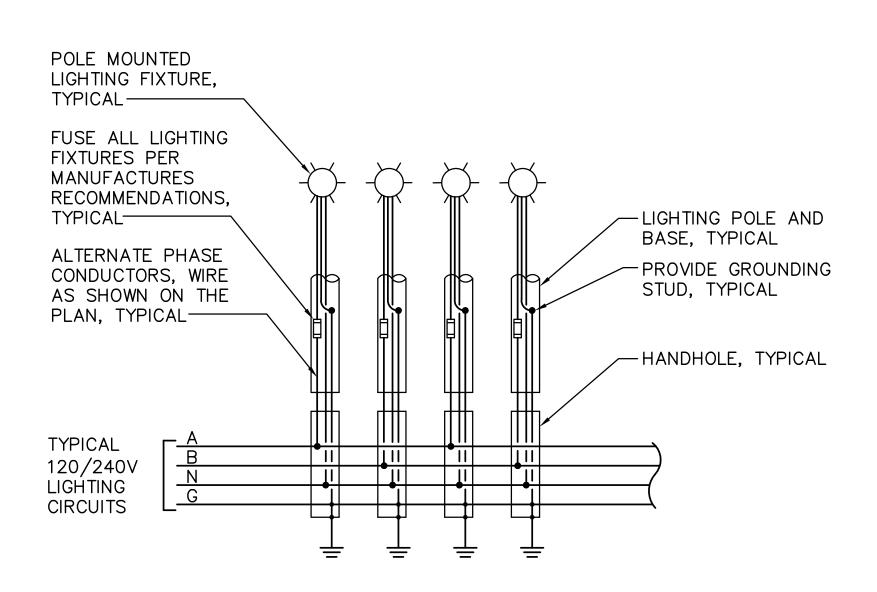
LIGHTING CONTROL DETAILS

PROJECT FILE NO. 604687



ONE LINE DIAGRAM

NOT TO SCALE



TYPICAL POLE LIGHTING WIRING SCHEMATIC DIAGRAM
NOT TO SCALE

 FS&T DWG. NO.

 QA-013

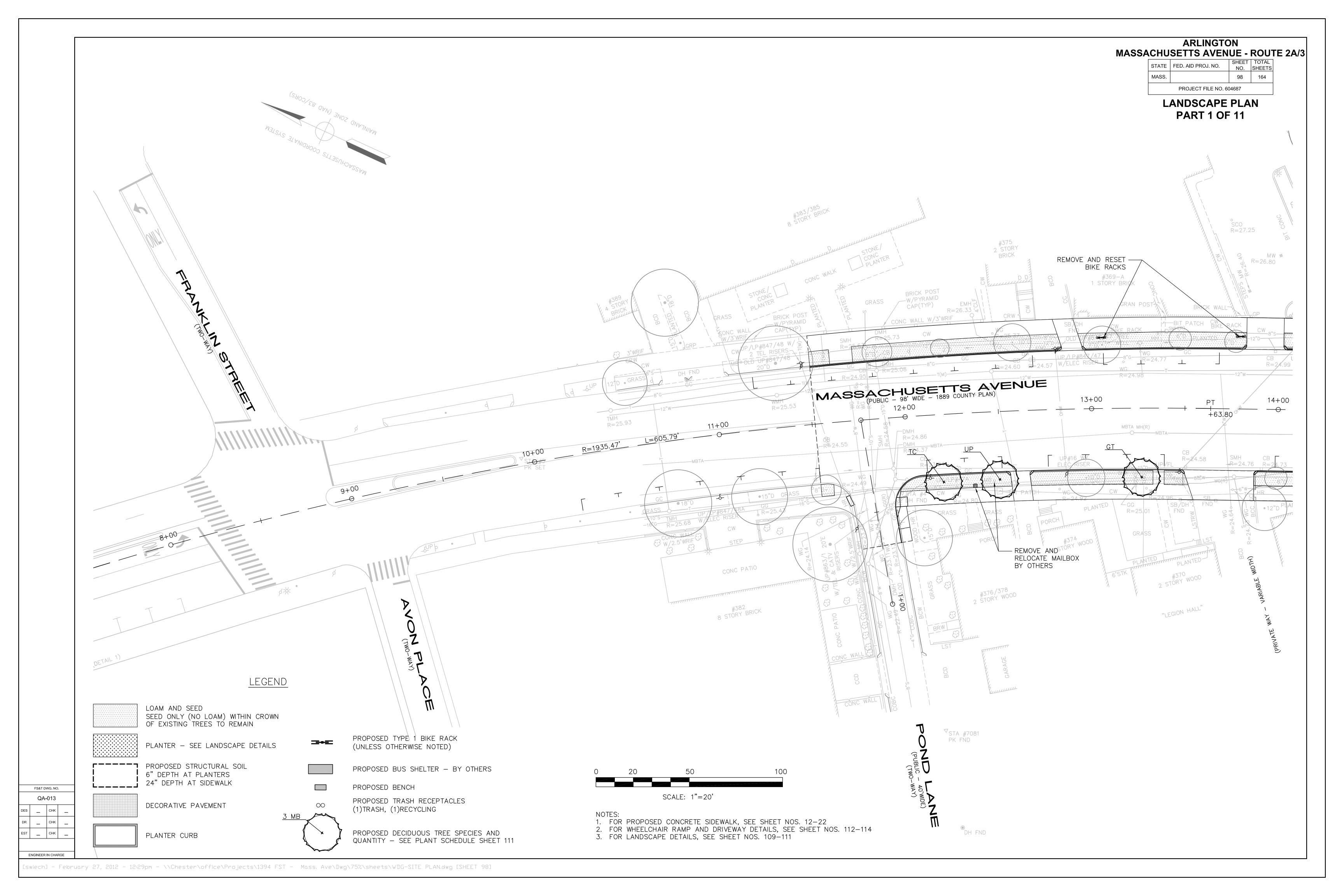
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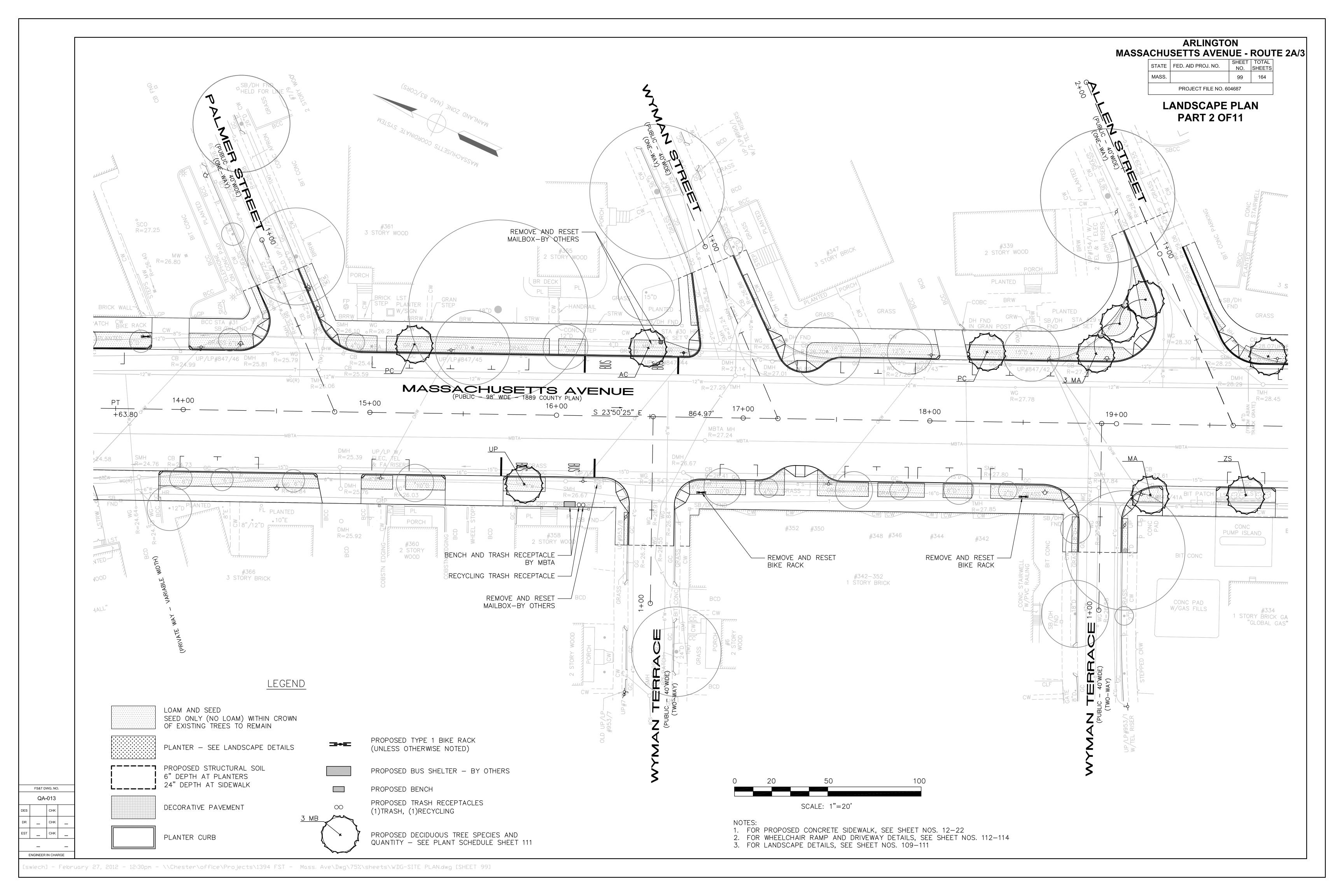
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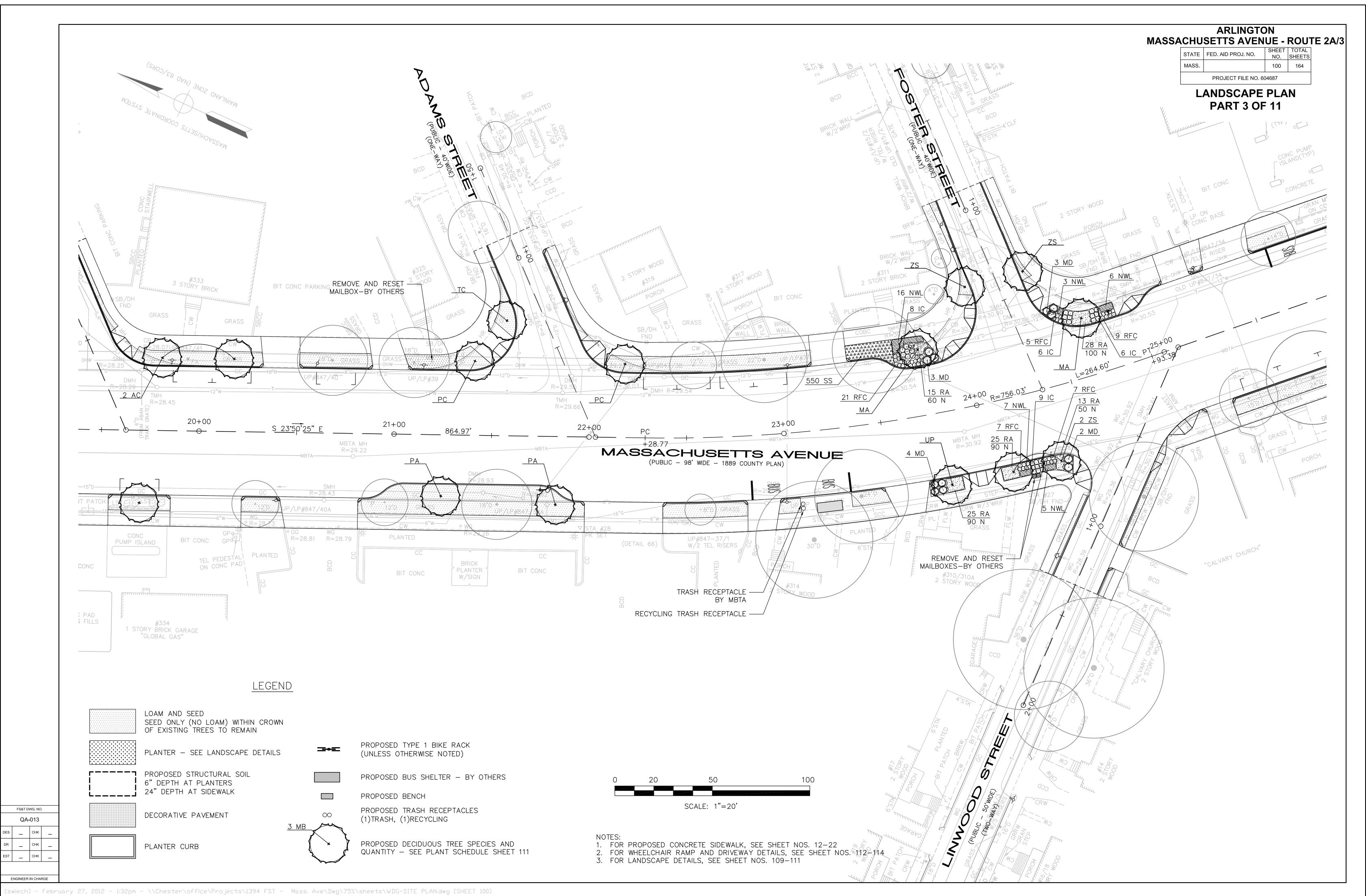
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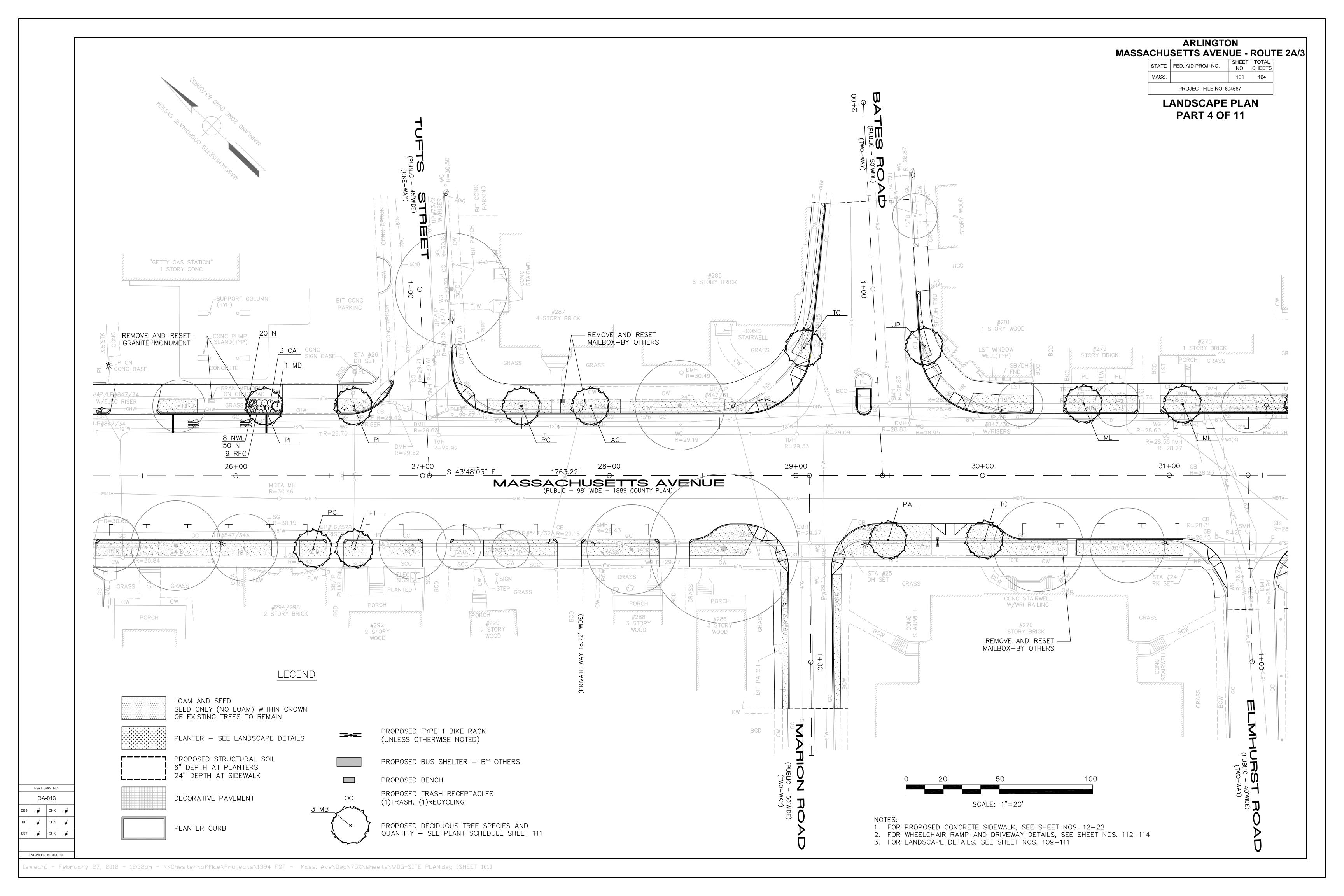
ENGINEER IN CHARGE

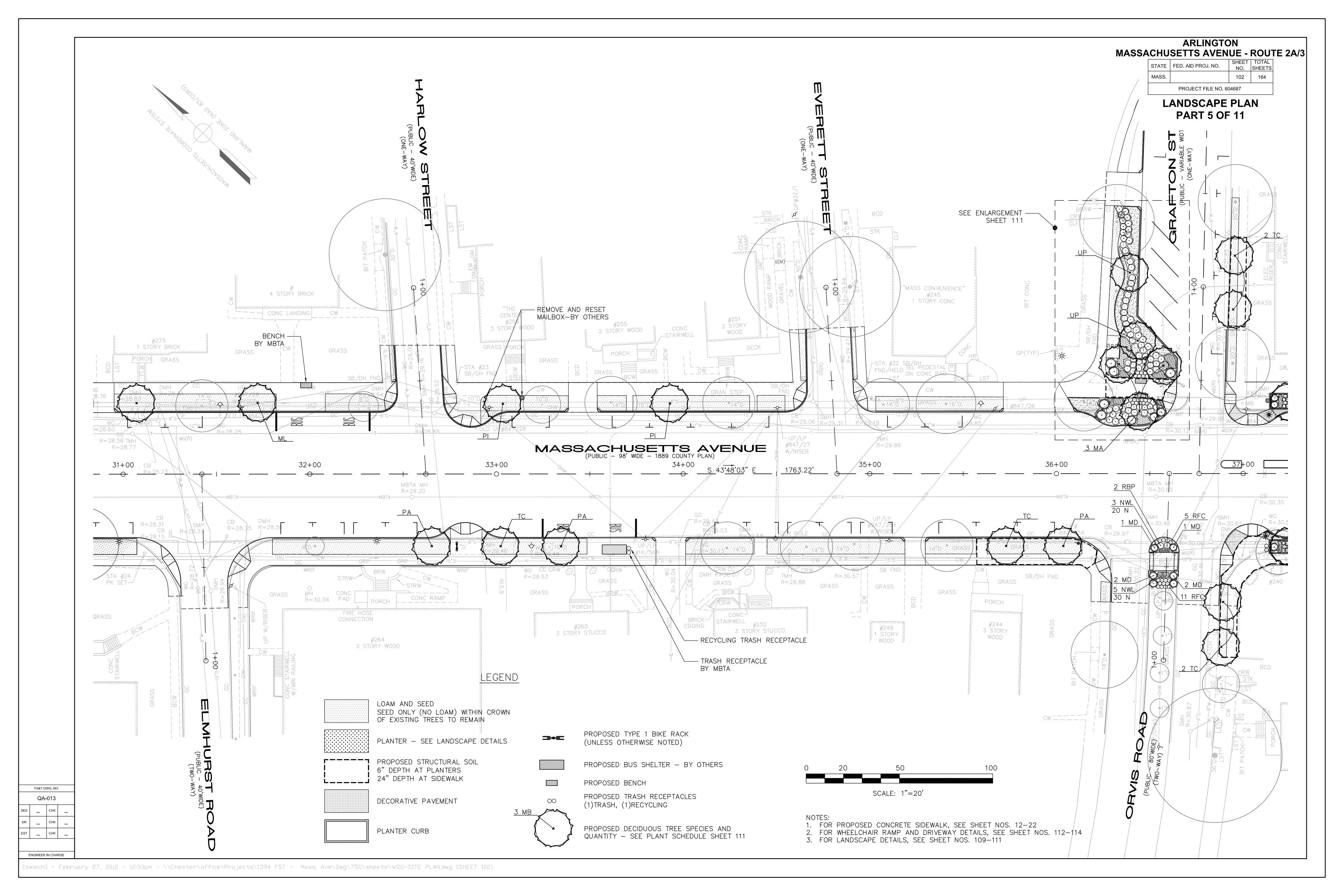
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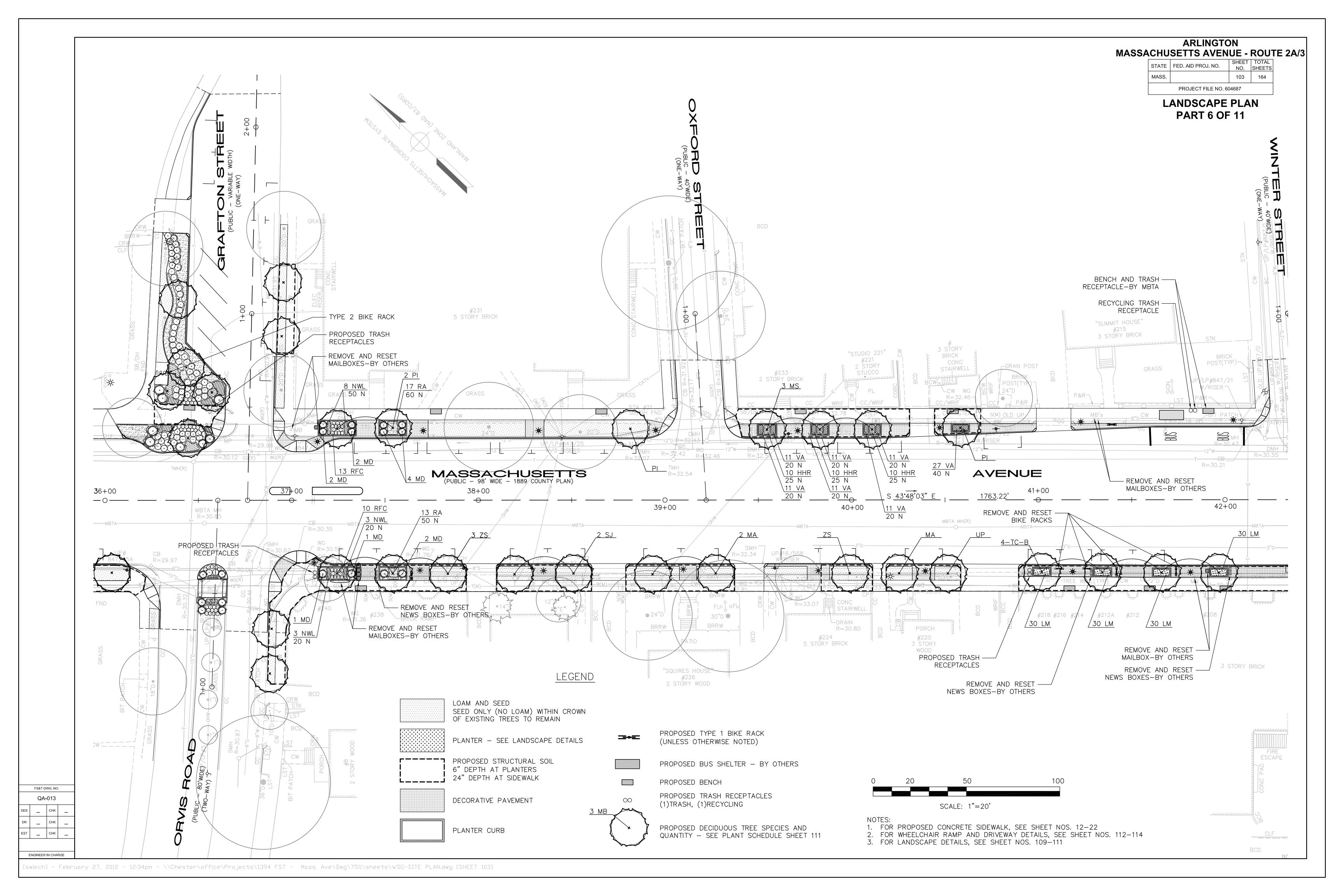


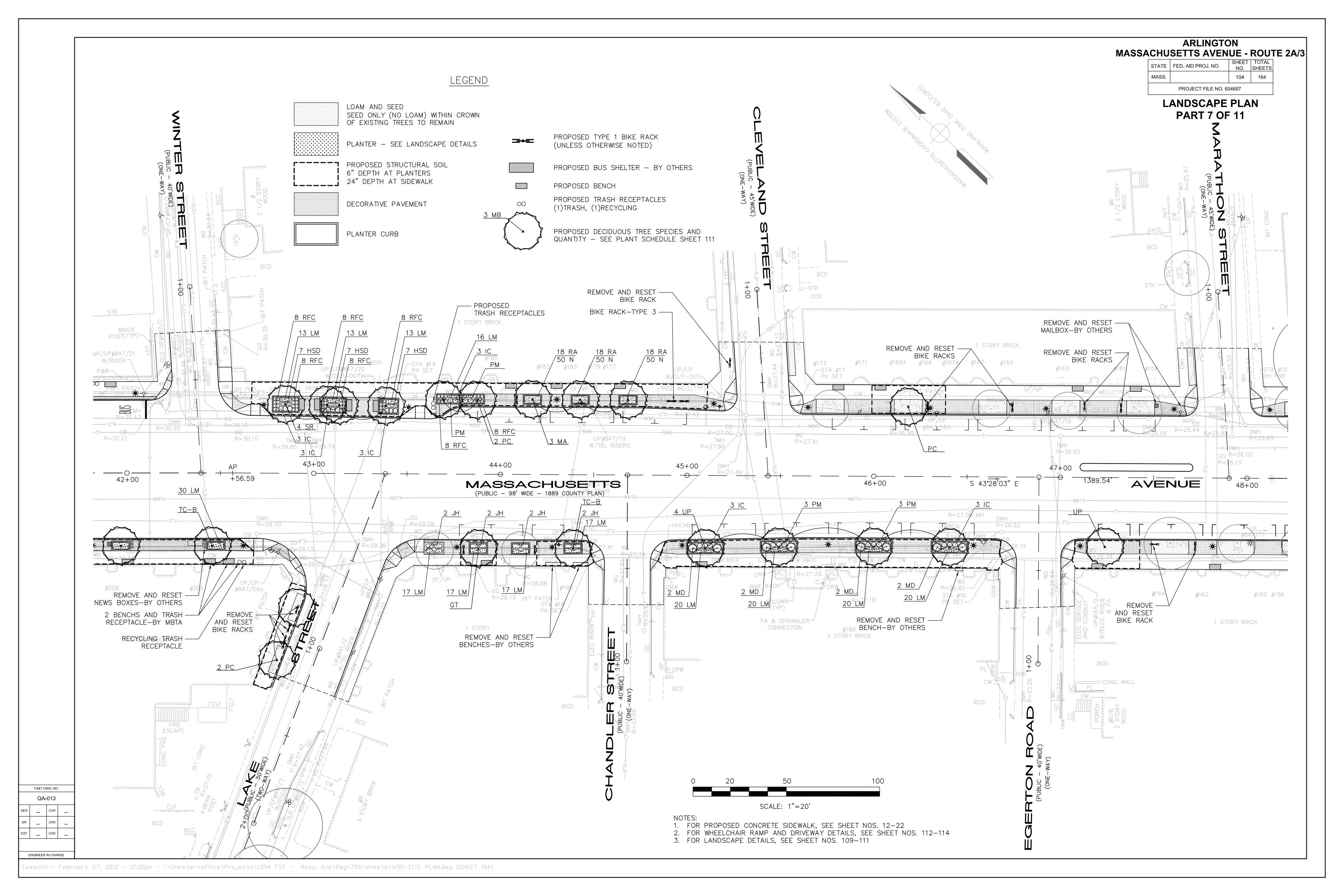


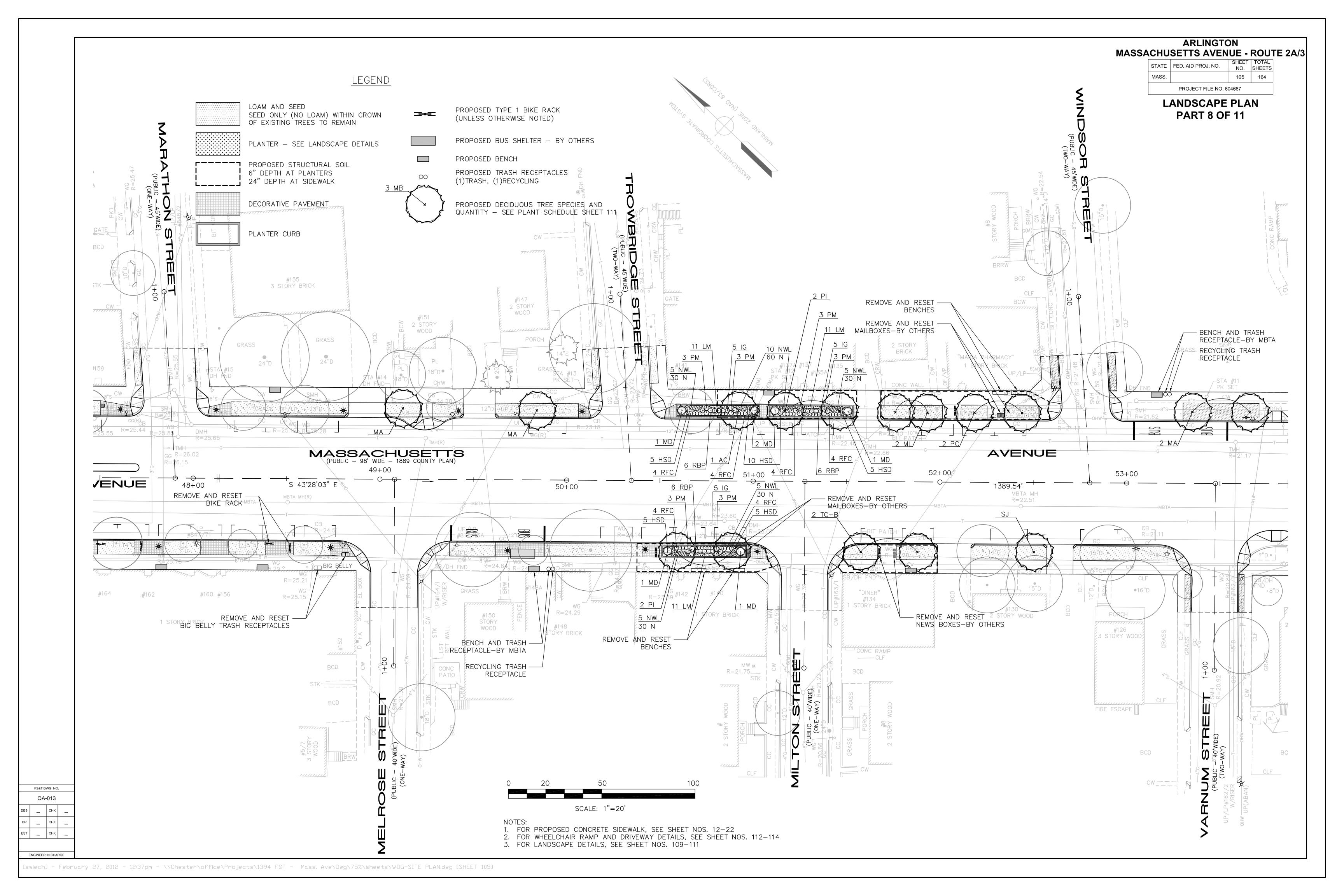


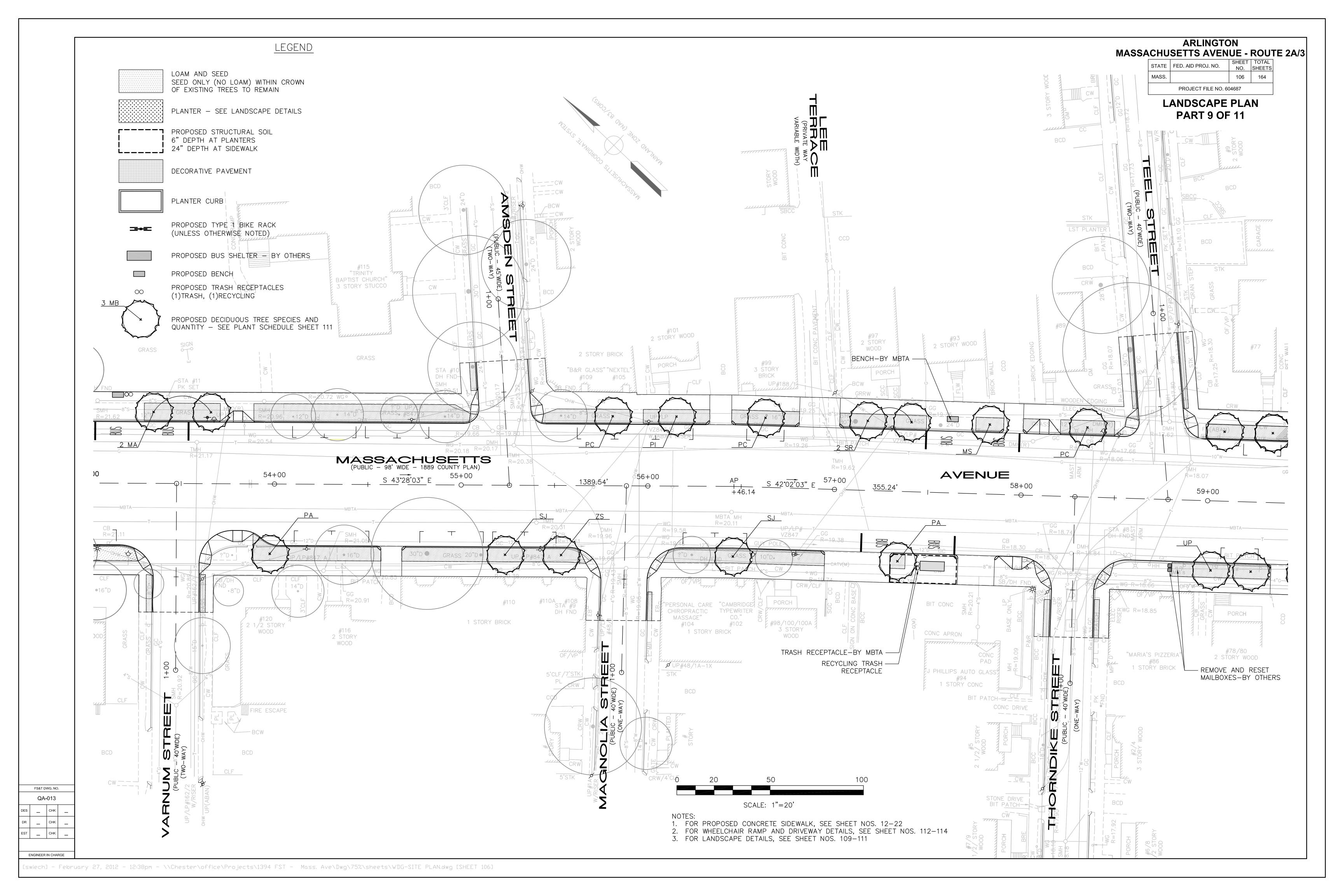


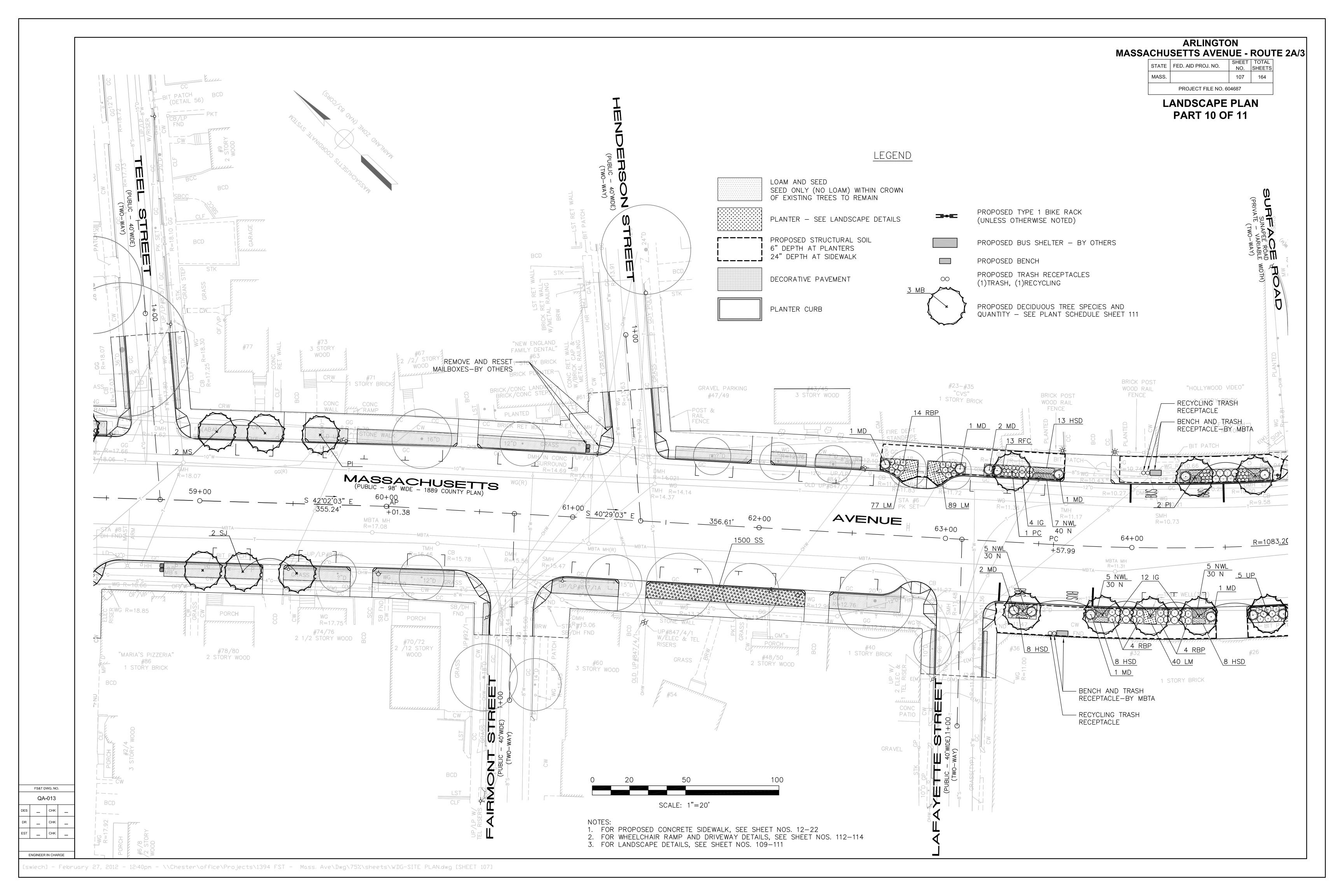


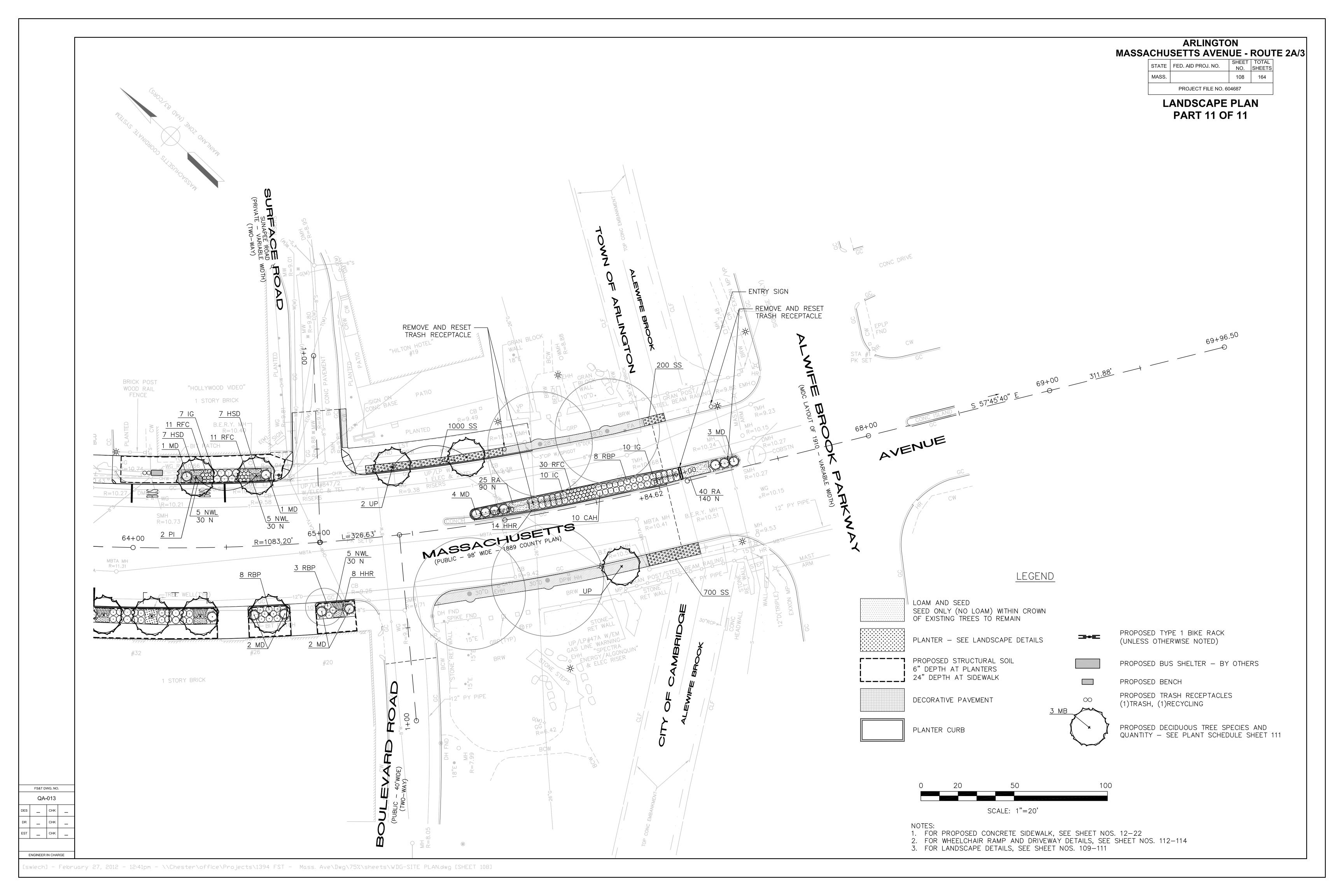


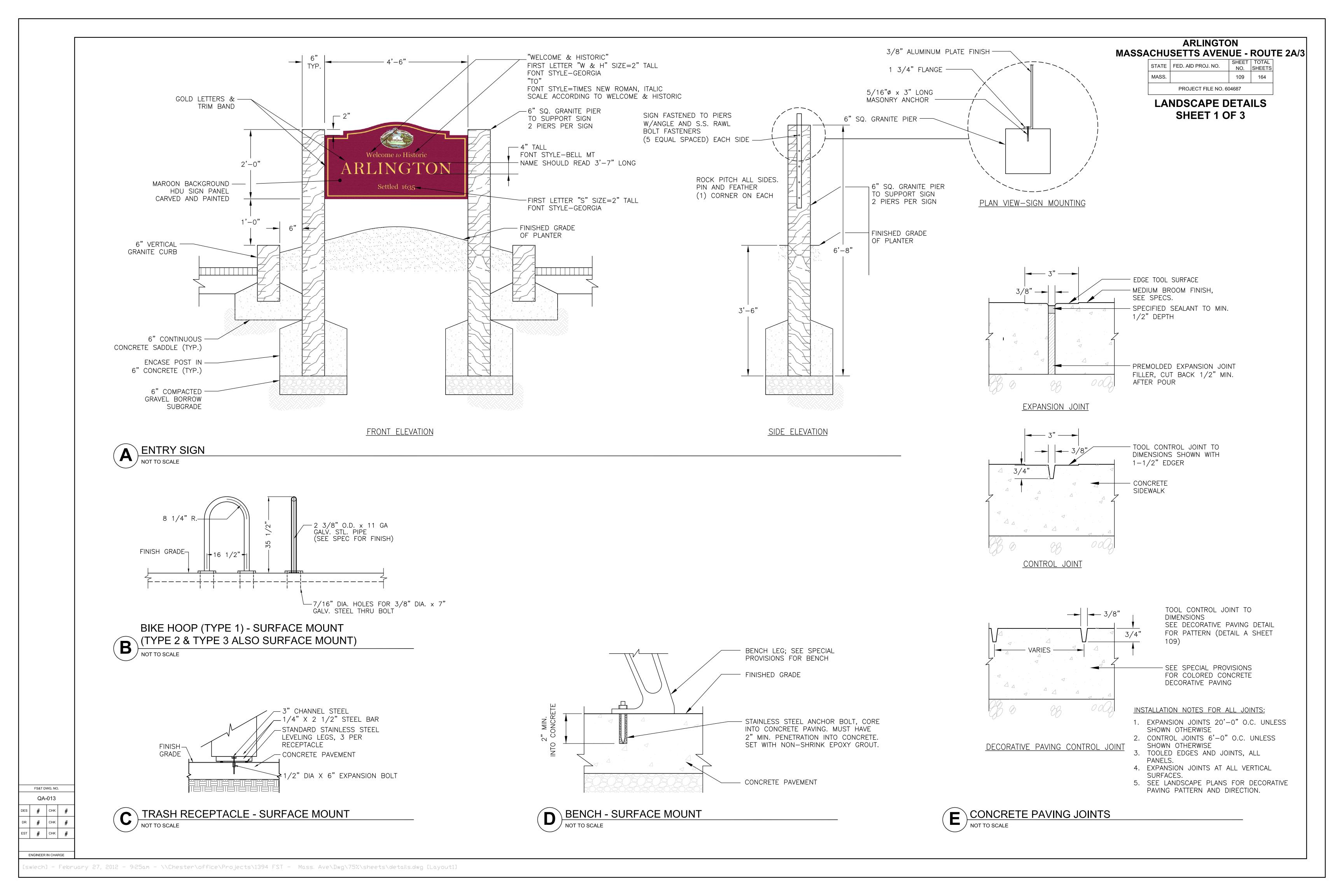


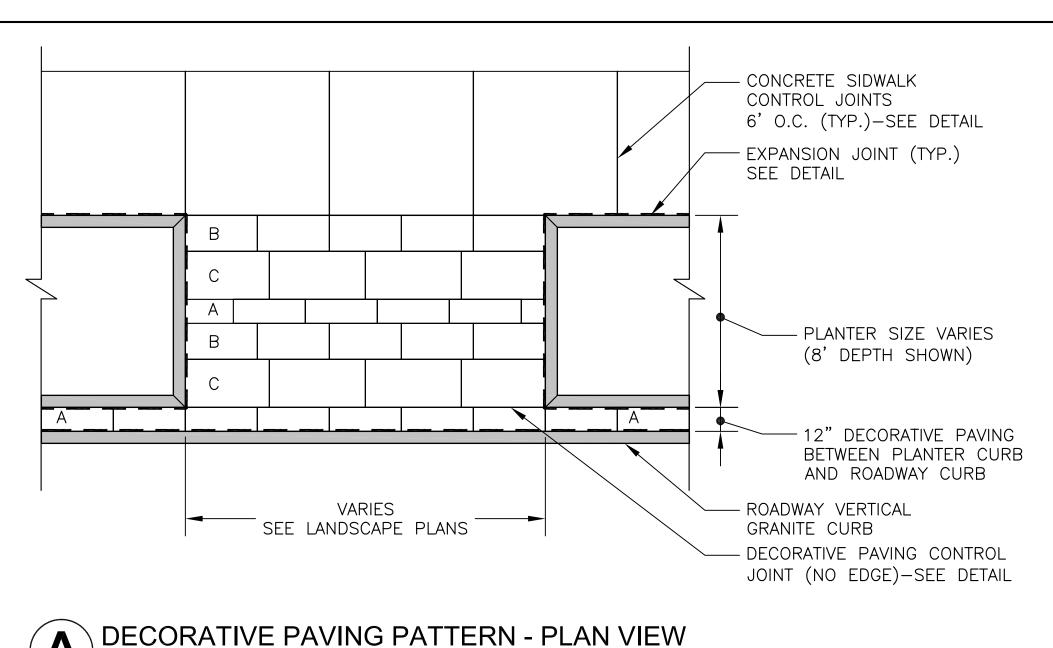












NOTES:

- 1. ALL DECORATIVE PAVING JOINTS TO BE
- STAGGERED 6" MIN.
- 2. JOINTS SHALL BE A MIN. OF 6" FROM CURB WHEN PARALLEL TO CURB.
- 3. EXPANSION JOINTS REQUIRED WHERE CONCRETE MEETS CURBS AND BUILDINGS4. PLANTER DEPTHS THAT VARY BETWEEN THOSE

SHOWN IN THE CHART BELOW SHALL SPLIT THE

DIFFERENCE AND ADD DEPTH TO A & B ROWS.

5. ROW "A" (12" WIDE) IS CONSISTENT BETWEEN ROADWAY CURB AND PLANTER CURB. CHART BELOW STARTS AT ROADWAY CURB.

PLANTER DEPTH	ROW SEQUENCE
6'-0"	A-B-C-A-B
6'-6"	A-C-A-C-B
7'-0"	A-B-A-C-A-B
7'-6"	A-B-C-B-A-B
8'-0"	A-C-B-A-C-B
8'-6"	A-C-A-C-B-C
9'-0"	A-C-B-A-C-A-B
9'-6"	A-B-C-A-B-C-B
10'-0"	A-C-B-C-A-B-C
10'-6"	A-C-B-A-B-C-A-B
	·

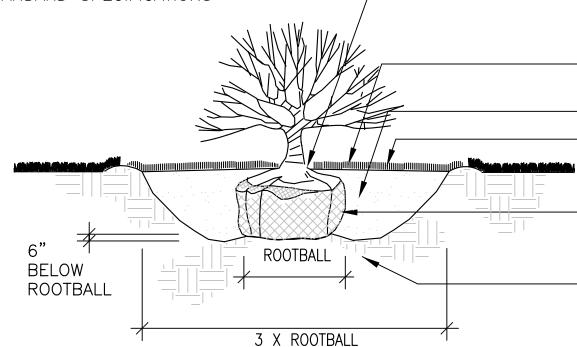
ROW A=12"W x 36"L ROW B=18"W x 36"L ROW C=24"W x 48"L

SCALE: 1/4"=1'-0"

NOTES: RAISE AND REPLANT ANY SHRUBS WHICH SETTLE MORE THAN 2 INCHES AFTER PLANTING & WATERING IN

SHRUBS SHALL BE SET PLUMB

WATER BY FLOODING TWICE IN FIRST TWO HOURS
AFTER PLANTING. WATER & MAINTAIN AS PER
STANDARD SPECIFICATIONS



SHRUB SHALL BE PLANTED SO THAT CROWN IS 2 INCH MIN. ABOVE FINISHED GRADE AFTER SETTLEMENT

2-3 INCH DEPTH AGED PINE BARK MULCH (PULL AWAY FROM BASE OF SHRUB)

BACKFILL MIX PER SPECIAL PROVISIONS

3 INCH HIGH EARTH WATERING SAUCER

COMPLETELY REMOVE SYNTHETIC BURLAP AND LACING. FOR CONTAINERIZED PLANTS, REMOVE CONTAINER PRIOR TO PLANTING

UNDISTURBED SUBGRADE

AROUND PIT

LOOSE OR CRACKED ROOTBALLS WILL NOT BE ACCEPTED FOR PLANTING

SHRUB PLANTING

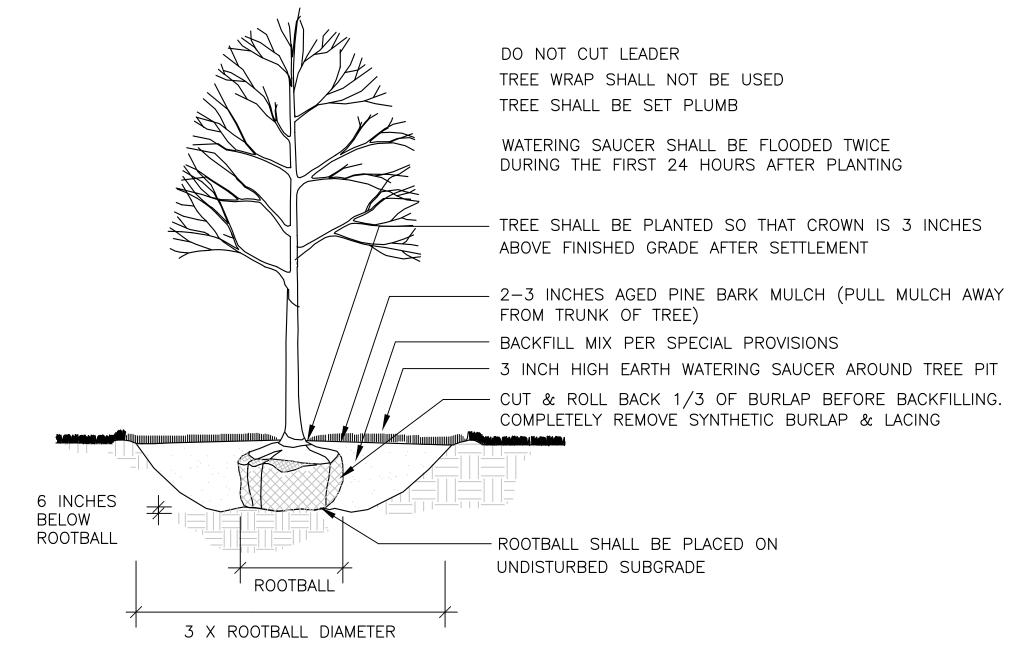
NOT TO SCALE

FS&T DWG. NO.

QA-013

| # | CHK | #

ENGINEER IN CHARGE



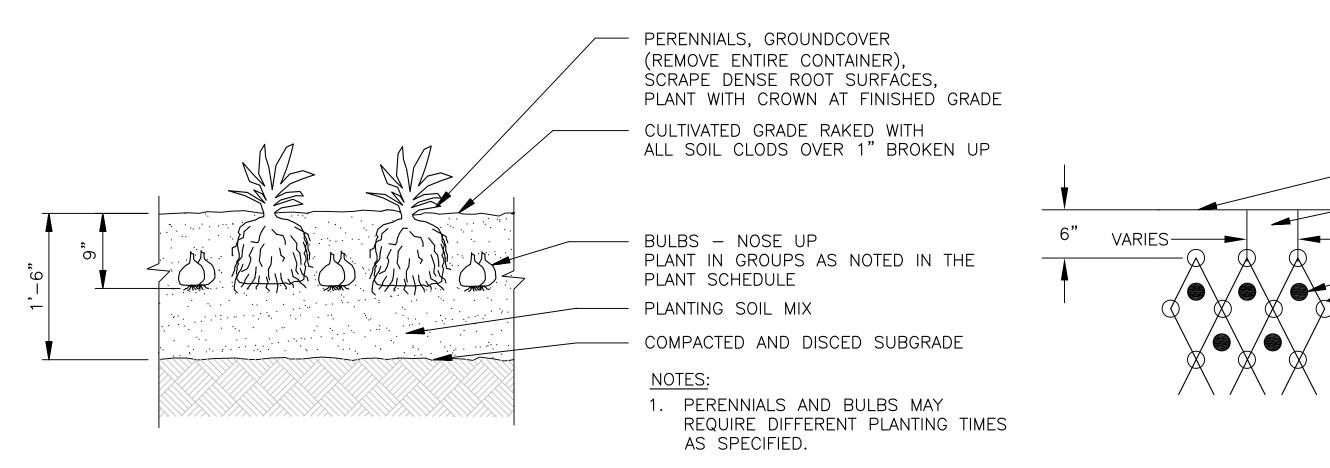
ARLINGTON
MASSACHUSETTS AVENUE - ROUTE 2A/3

STATE FED. AID PROJ. NO. SHEET NO. SHEETS

MASS. 110 164

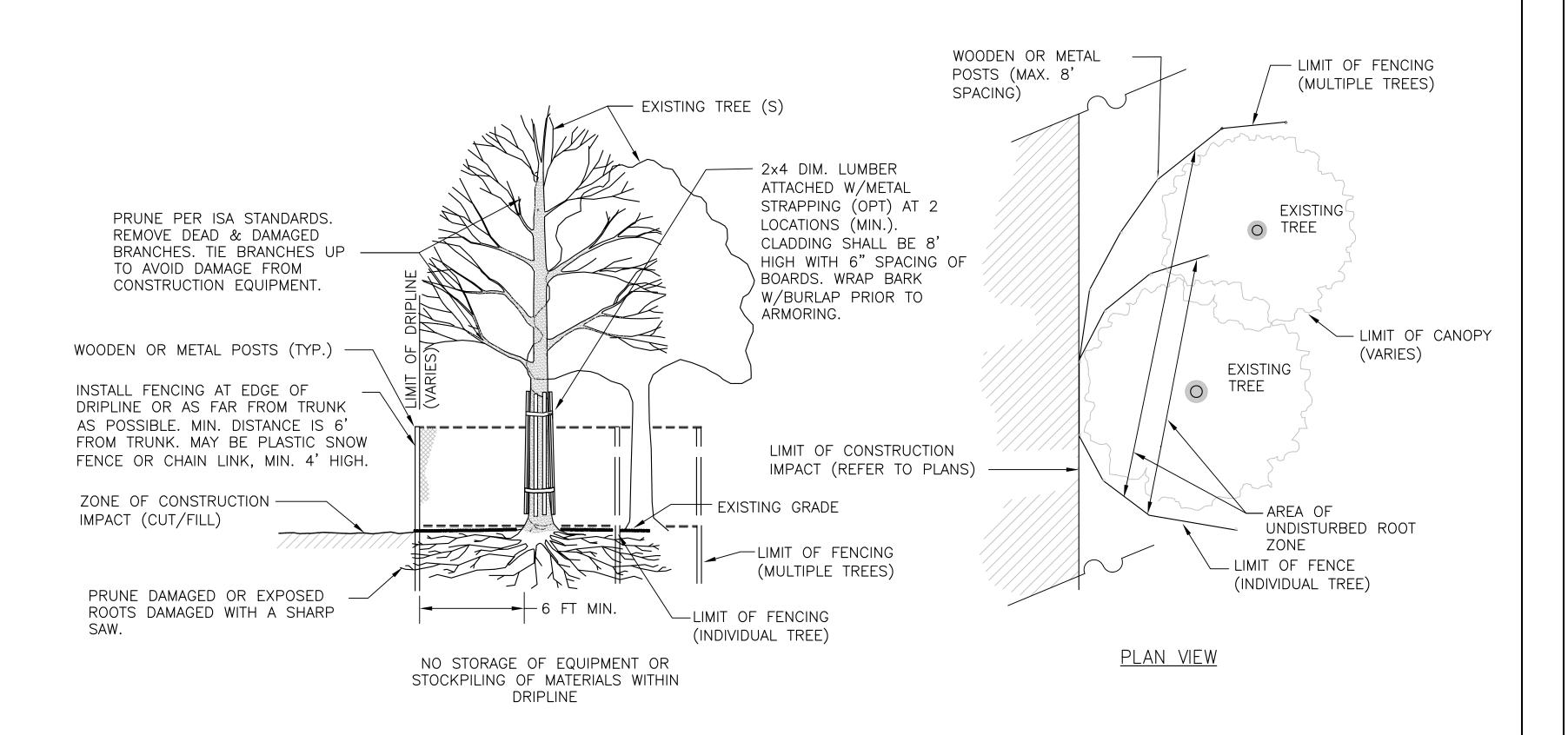
PROJECT FILE NO. 604687

LANDSCAPE DETAILS
SHEET 2 OF 3



PERENNIAL / GROUNDCOVER / BULB PLANTING

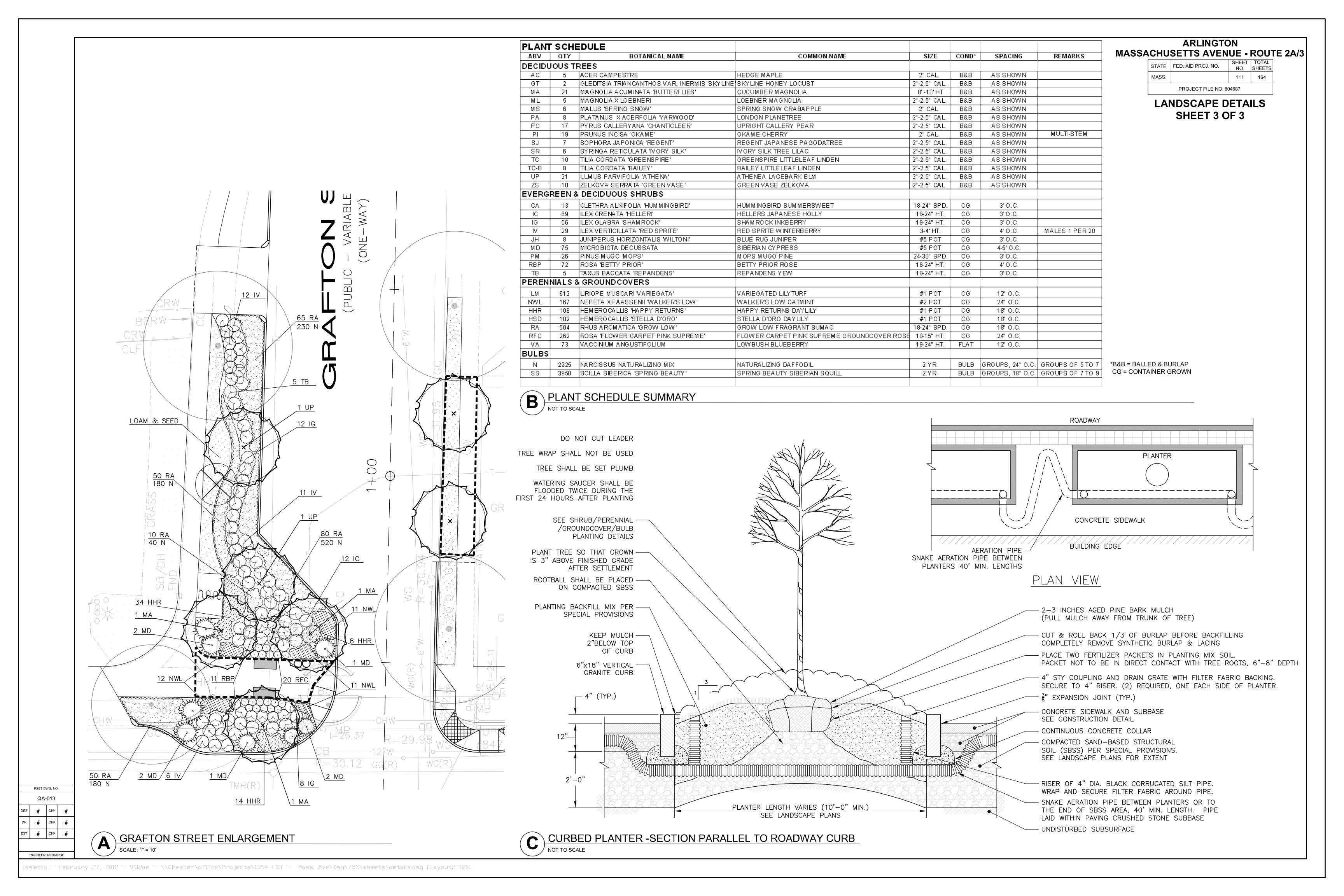
NOT TO SCALE



TREE PROTECTION

NOT TO SCALE

DECIDUOUS TREE PLANTING IN LAWN
NOT TO SCALE



WHEELCHAIR RAMP LAYOUT DATA

WCR	RAMP REFE	RENCE POI	NT	WIDTH OF SIDEWALK	WIDTH OF	LENGTH OF	ROADWAY GUTTER	TRANSITIO	N LENGTH
#	BASELINE	STATION	OFFSET	(W)	RAMP	RAMP	SLOPE	LEFT SIDE	RIGHT SIDE
1	POND LANE	00+41.58	11.57 RT	_	5.00'		3.60	6.00'	6.00'
2	POND LANE	00+46.55	11.15 LT	_	5.00'		-1.60	6.00'	6.00'
3	PALMER STREET	00+51.71	18.14 LT	_	5.00'	8.00'	0.90%	6.50'	7.67'
4	PALMER STREET	00+38.84	12.47 RT	_	5.00'	4.50'	-2.00%	9.00'	6.50'
5	WYMAN TERRACE 1	00+40.78	13.54 RT	_	5.00'	5.00'	-1.40%	9.00'	6.50'
6	WYMAN TERRACE 1	00+40.78	13.56 LT	_	5.00'	6.00'	0.00%	6.50'	6.50'
7	WYMAN STREET	00+52.00	22.85 LT	_	5.00'	6.00'	0.00%	6.50'	6.50'
8	WYMAN STREET	00+37.59	13.18 RT	_	5.00'	6.00'	0.50%	6.50'	7.67'
9	MASS AVE	17+30.92	24.92 LT	24.00'	5.00'	6.00'	0.00%	6.50'	6.50'
10	MASS AVE	17+30.97	25.00 RT	18.00'	5.00'	6.00'	-0.70%	7.67'	6.50'
11	WYMAN TERRACE 2	00+41.33	15.02 RT	_	5.00'	4.00'	-0.70%	7.67'	6.50'
12	WYMAN TERRACE 2	00+41.33	15.08 LT	_	5.00'	4.00'	0.10%	6.50'	7.67'
13	ALLEN STREET	00+57.27	26.36 LT	_	5.00'	6.00'	1.10%	6.50'	9.00'
14	ALLEN STREET	00+39.27	13.04 RT	_	5.00'	6.00'	-0.40%	7.67'	6.50'
15	ADAMS STREET	00+57.05	25.88 LT	_	5.00'	6.00'	1.00%	6.50'	7.67'
16	ADAMS STREET	00+39.62	13.22 RT	_	5.00'	9.00'	0.50%	6.50'	7.67'
17	MASS AVE	23+95.13	33.39 RT	14.70'	5.00'	7.60'	0.20%	8.43'	7.67'
18	MASS AVE	23+95.53	28.50 LT	_	5.00'	6.00'	0.50%	6.50'	7.67'
19	FOSTER STREET	00+49.18	15.91 LT	_	5.00'	6.00'	0.50%	6.50'	7.67'
20	FOSTER STREET	00+45.89	12.03 RT	_	5.00'	7.00'	-0.60%	7.67	6.50'
21	LINWOOD STREET	00+77.36	15.45 RT	_	5.00'	8.50'	2.90%	6.50'	11.00'
22	LINWOOD STREET	00+55.88	12.18 LT	7.87'	5.00'	3.87'	-1.40%	9.00'	6.50'
23	MASS AVE	24+96.36	36.80 RT	_	5.00'	6.00'	-1.10%	9.00'	6.50'
24	MASS AVE	24+95.92	25.00 LT	_	5.00'	6.00'	-0.60%	7.67'	6.50'
25	TUFTS STREET	00+42.72	21.52 LT	_	5.00'	2.50'	-0.70%	7.67'	6.50'
26	TUFTS STREET	00+40.61	19.98 RT	_	5.00'	6.00'	-0.50%	7.67	6.50'
WCB	RAMP REFE	RENCE POI	NT	WIDTH OF	WIDTH	LENGTH	ROADWAY		N LENGTH
WCR #		<u> </u>		SIDEWALK	OF	OF	GUTTER		
	BASELINE	STATION	OFFSET	(W)	RAMP	RAMP	SLOPE	LEF I SIDE	RIGHT SIDE
27	MASS AVE	28+82.84	34.61 LT	_	5.00'	6.00'	-0.40%	7.67'	6.50'
28	MASS AVE	28+82.30	28.32 RT	_	5.00'	6.00'	-0.20%	7.67'	6.50'
29	MARION ROAD	00+42.16	12.73 RT	_	5.00'	5.00'	-0.20%	7.67'	6.50'
30	MARION ROAD	00+43.51	12.48 LT	_	5.00'	6.00'	+0.40%	6.00'	0.00'
31	BATES ROAD	00+55.33	70 OF LT					****	0.00
32			39.05 LT	_	5.00'	7.00'	-0.40%	7.67'	6.50'
77	BATES ROAD	00+52.45	26.04 RT	_		7.00' 8.00'			
33	MASS AVE				5.00'		-0.40%	7.67'	6.50'
34		00+52.45	26.04 RT	_	5.00' 5.00'	8.00'	-0.40% 0.00%	7.67' 6.50'	6.50' 6.50'
	MASS AVE	00+52.45 29+83.70	26.04 RT 39.19 LT		5.00' 5.00' 5.00'	8.00' 6.00'	-0.40% 0.00% -0.50%	7.67' 6.50' 7.67'	6.50' 6.50' 6.50'
34	MASS AVE MASS AVE	00+52.45 29+83.70 29+82.63	26.04 RT 39.19 LT 26.00 RT		5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 6.00'	-0.40% 0.00% -0.50% 0.90%	7.67' 6.50' 7.67' 6.50'	6.50' 6.50' 6.50' 7.67'
34 35	MASS AVE MASS AVE ELMHURST ROAD	00+52.45 29+83.70 29+82.63 00+43.94	26.04 RT 39.19 LT 26.00 RT 16.55 RT		5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 6.00' 5.00'	-0.40% 0.00% -0.50% 0.90% -4.20%	7.67' 6.50' 7.67' 6.50' 15.00'	6.50' 6.50' 6.50' 7.67' 6.50'
34 35 36	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT		5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 6.00' 5.00' 8.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50'	6.50' 6.50' 6.50' 7.67' 6.50' 9.00'
34 35 36 37	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT	- 23.00' - - -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 6.00' 5.00' 8.00' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50'	6.50' 6.50' 6.50' 7.67' 6.50' 9.00' 7.67'
34 35 36 37 38	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT	- 23.00' - - - -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 6.00' 5.00' 8.00' 6.00' 7.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 6.50' 11.00'	6.50' 6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50'
34 35 36 37 38 39	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT	- 23.00' - - - -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 6.00' 5.00' 8.00' 6.00' 7.00' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 11.00' 6.50'	6.50' 6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50'
34 35 36 37 38 39 40	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT	- 23.00' - - - -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 7.00' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 6.50' 11.00' 6.50' 7.67'	6.50' 6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50'
34 35 36 37 38 39 40 41	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT	- 23.00' - - - - - 23.00'	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 7.00' 6.00' 6.00	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 11.00' 6.50' 7.67' 6.50'	6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 6.50' 7.67'
34 35 36 37 38 39 40 41 42	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET EVERETT STREET	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42 00+40.26	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT 11.91 RT	- 23.00' - - - - - 23.00' -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 6.00' 6.00' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60% -1.00%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 11.00' 6.50' 7.67' 6.50' 7.67'	6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 6.50' 7.67' 7.67'
34 35 36 37 38 39 40 41 42 43	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET EVERETT STREET ORVIS ROAD	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42 00+40.26 00+48.76	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT 11.91 RT 31.57 RT	- 23.00' - - - - - 23.00' -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 6.00' 6.00' 6.00' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60% -1.00% -1.10%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 6.50' 11.00' 6.50' 7.67' 6.50' 7.67' 9.00'	6.50' 6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 7.67' 7.67' 6.50'
34 35 36 37 38 39 40 41 42 43 44	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET EVERETT STREET ORVIS ROAD ORVIS ROAD	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42 00+40.26 00+48.76 00+45.34	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT 11.91 RT 31.57 RT 28.75 LT 13.77 LT	- 23.00' - - - - - 23.00' -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.67'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60% -1.00% -1.00%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 11.00' 6.50' 7.67' 6.50' 7.67' 9.00' 7.67'	6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 7.67' 7.67' 7.67' 6.50' 6.50'
34 35 36 37 38 39 40 41 42 43 44 45	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET EVERETT STREET ORVIS ROAD ORVIS ROAD GRAFTON STREET	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42 00+40.26 00+48.76 00+45.34 00+39.43	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT 11.91 RT 31.57 RT 28.75 LT 13.77 LT	- 23.00' - - - - 23.00' - - - - -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.67' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60% -1.00% -1.10% 1.50%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 11.00' 6.50' 7.67' 6.50' 7.67' 9.00' 7.67' 6.50'	6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 7.67' 7.67' 7.67' 6.50' 9.00'
34 35 36 37 38 39 40 41 42 43 44 45 46	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET EVERETT STREET ORVIS ROAD ORVIS ROAD GRAFTON STREET	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42 00+40.26 00+48.76 00+45.34 00+39.43 00+40.30	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT 11.91 RT 31.57 RT 28.75 LT 13.77 LT 12.87 RT	- 23.00' - - - - 23.00' - - - - -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 7.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.67' 6.00' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60% -1.00% -1.10% -1.00% 1.50% -0.50%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 6.50' 11.00' 6.50' 7.67' 6.50' 7.67' 9.00' 7.67' 6.50' 7.67'	6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 6.50' 7.67' 7.67' 7.67' 7.67' 9.00' 6.50' 6.50' 6.50'
34 35 36 37 38 39 40 41 42 43 44 45 46 47	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET EVERETT STREET ORVIS ROAD ORVIS ROAD GRAFTON STREET MASS AVE	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42 00+40.26 00+45.34 00+45.34 00+39.43 00+40.30 37+05.10	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT 11.91 RT 31.57 RT 28.75 LT 13.77 LT 12.87 RT 26.00 LT	- 23.00' - - - - - 23.00' - - - - -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 7.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.67' 6.00' 6.00' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60% -1.00% -1.10% -1.00% 1.50% -0.50%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 6.50' 11.00' 6.50' 7.67' 6.50' 7.67' 9.00' 7.67' 6.50' 7.67' 7.67' 7.67'	6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 7.67' 7.67' 7.67' 7.67' 9.00' 6.50' 6.50' 6.50' 6.50' 6.50'
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET EVERETT STREET ORVIS ROAD ORVIS ROAD ORVIS ROAD GRAFTON STREET MASS AVE MASS AVE	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42 00+40.26 00+45.34 00+45.34 00+39.43 00+40.30 37+05.10	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT 11.91 RT 31.57 RT 28.75 LT 13.77 LT 12.87 RT 26.00 LT 27.02 RT	- 23.00' - - - - - 23.00' - - - - -	5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 7.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60% -1.00% -1.10% -1.00% 1.50% -0.50% 0.50%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 11.00' 6.50' 7.67' 6.50' 7.67' 9.00' 7.67' 6.50' 7.67' 6.50' 7.67' 6.50'	6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 7.67' 7.67' 7.67' 7.67' 6.50' 6.50' 9.00' 6.50' 9.00' 7.67'
34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	MASS AVE MASS AVE ELMHURST ROAD ELMHURST ROAD HARLOW STREET HARLOW STREET MASS AVE MASS AVE EVERETT STREET ORVIS ROAD ORVIS ROAD ORVIS ROAD GRAFTON STREET GRAFTON STREET MASS AVE MASS AVE MASS AVE OXFORD STREET	00+52.45 29+83.70 29+82.63 00+43.94 00+44.67 00+41.07 00+39.29 32+83.23 32+83.35 00+41.42 00+40.26 00+48.76 00+45.34 00+39.43 00+40.30 37+05.10 00+42.18	26.04 RT 39.19 LT 26.00 RT 16.55 RT 17.14 LT 12.88 LT 11.92 RT 25.37 LT 26.00 RT 14.32 LT 11.91 RT 31.57 RT 28.75 LT 13.77 LT 12.87 RT 26.00 LT 27.02 RT 15.79 LT	- 23.00' - - - - 23.00' - - - - - - - 26.00'	5.00' 5.00'	8.00' 6.00' 5.00' 8.00' 6.00' 7.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00' 6.00' 4.00'	-0.40% 0.00% -0.50% 0.90% -4.20% 1.10% 0.40% -2.10% 0.00% -0.30% 0.60% -1.00% -1.10% -1.00% 1.50% -0.50% -0.50% 0.50% -0.90%	7.67' 6.50' 7.67' 6.50' 15.00' 6.50' 6.50' 11.00' 6.50' 7.67' 6.50' 7.67' 9.00' 7.67' 6.50' 7.67' 6.50' 7.67' 7.67' 7.67'	6.50' 6.50' 7.67' 6.50' 9.00' 7.67' 6.50' 6.50' 6.50' 7.67' 7.67' 7.67' 6.50' 6.50' 6.50' 9.00' 6.50' 7.67' 6.50' 6.50'

NOTES:

- 1. DETECTABLE WARNING PANELS SHALL BE INSTALLED AS PER STD. DWG. E 107.6.5 DATED AUGUST 2010.
- 2. UTILITY POLES, LIGHT POLE FOUNDATIONS, MAIL BOXES, AND HYDRANTS THAT ARE TO BE RETAINED OR ADJUSTED SHALL BE REMOVED AND RESET IF FIELD CONDITIONS INDICATE THE CLEAR PATH OF TRAVEL ON THE SIDEWALK IS LESS THAN 36" IN WIDTH.
- 3. ADA/MA AAB REQUIREMENTS SHALL BE FOLLOWED.
- 4. * = TOLERANCE FOR CONSTRUCTION = $0.5\%\pm$

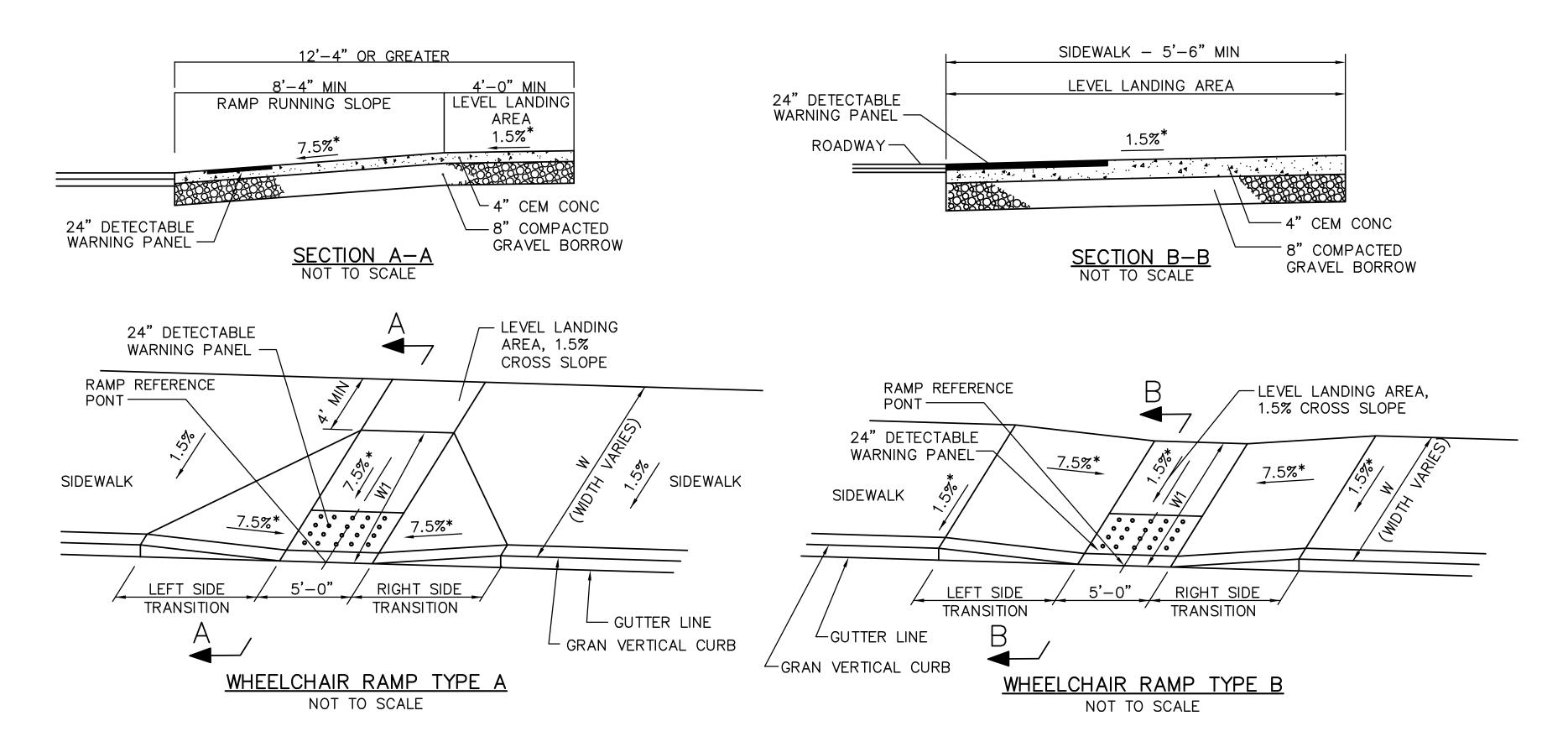
ARLINGTON MASSACHUSETTS AVENUE - ROUTE 2A/3

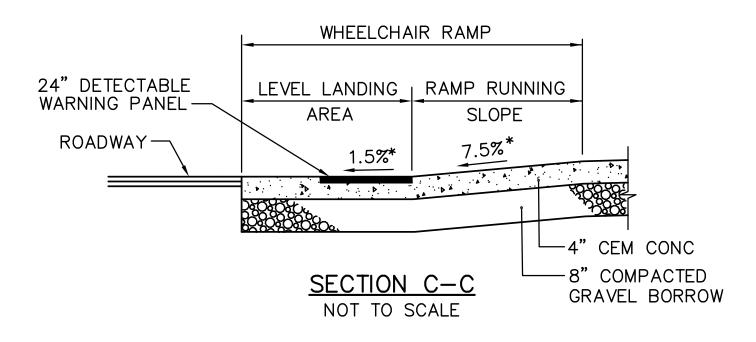
STATE FED. AID PROJ. NO. SHEET NO. SHEETS

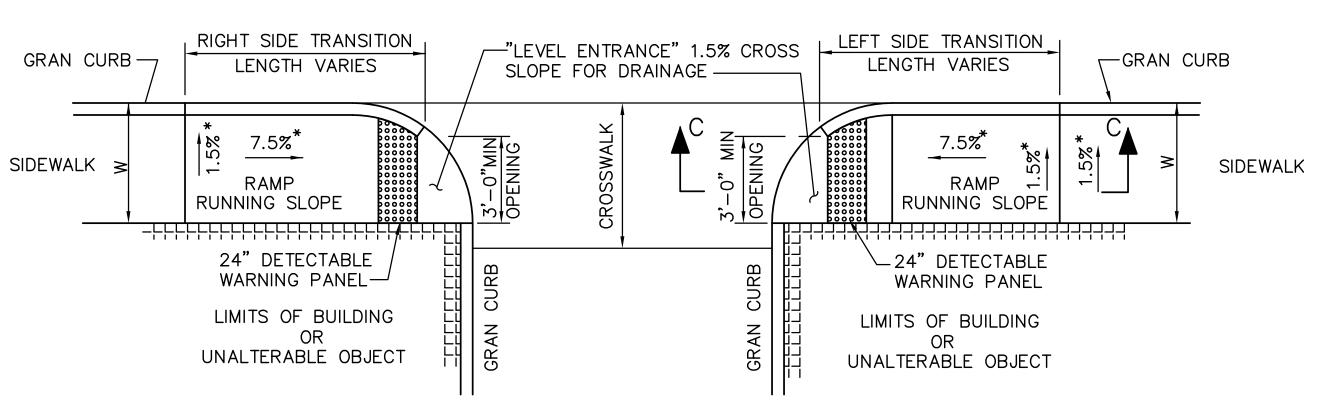
MASS. 112 164

PROJECT FILE NO. 604687

WHEELCHAIR RAMP AND DRIVEWAY DETAILS
PART 1 OF 3







WHEELCHAIR RAMP TYPE C
NOT TO SCALE

FS&T DWG. NO.

QA-013

DES BTR CHK JMM

DR M.IC CHK JMM

DR MJC CHK JMM

EST MJC CHK JMM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS						
MASS.		113	164						
	PROJECT FILE NO. 604687								

WHEELCHAIR RAMP AND **DRIVEWAY DETAILS** PART 2 OF 3

WHEELCHAIR RAMP LAYOUT DATA

					<u> </u>		T			1
	WCR #	RAMP REFE	RENCE POIN	NT	WIDTH OF SIDEWALK	WIDTH OF	LENGTH OF	ROADWAY GUTTER	TRANSITIO	N LENGTH
	#	BASELINE	STATION	OFFSET	(W)	RAMP	RAMP	SLOPE	LEFT SIDE	RIGHT SIDE
	53	MASS AVE	42+68.59	30.87 LT	18.00'	5.00'	6.00'	-1.10%	9.00'	6.50'
	54	MASS AVE	42+68.59	35.00 RT	14.00'	5.00'	6.67'	0.40%	6.50'	7.67'
	55	LAKE STREET	00+60.05	26.80 RT	_	5.00'	3.77	0.00%	6.50'	6.50'
**	56	LAKE STREET	00+40.14	17.13 LT	_	5.00'	6.67'	0.00%	6.50'	6.50'
**	57	MASS AVE	43+56.80	35.00 RT	14.00'	5.00'	6.67'	0.30%	6.50'	7.67'
	58	MASS AVE	43+56.80	29.63 LT	19.33'	5.00'	6.67	-1.10%	9.00'	6.50'
	59	CHANDLER STREET	00+42.41	13.04 RT	_	5.00'	5.50'	1.20%	6.50'	7.67'
	60	CHANDLER STREET	00+42.21	13.23 LT	_	5.00'	4.00'	-0.80%	7.67'	6.50'
	61	CLEVELAND STREET	00+41.94	14.25 LT	_	5.00'	6.50'	1.70%	6.50'	9.00'
	62	CLEVELAND STREET	00+39.11	14.04 RT	_	5.00'	6.67	-1.10%	9.00'	6.50'
	63	EGERTON ROAD	00+40.50	12.70 RT	_	5.00'	7.50'	1.00%	6.50'	7.67'
	64	EGERTON ROAD	00+40.14	12.35 LT	_	5.00'	6.00'	-0.60%	7.67'	6.50'
	65	MARATHON STREET	00+40.74	14.42 LT	_	5.00'	6.67'	0.80%	6.50'	7.67'
	66	MARATHON STREET	00+38.84	13.93 RT	_	5.00'	6.00'	0.00%	6.50'	6.50'
	67	_	_	_	_	_	-	_	_	_
	68	_	_	_	_	_	_	_	_	_
	69	MELROSE STREET	00+41.18	15.38 RT	_	5.00'	4.50'	2.60%	6.50'	11.00'
**	70	MELROSE STREET	00+41.18	15.34 LT	_	5.00'	4.00'	-1.40%	3.00'	6.50'
	71	TROWBRIDGE STREET	00+40.61	13.13 LT	_	5.00'	6.67	1.30%	6.50'	9.00'
	72	TROWBRIDGE STREET		13.13 ET	_	5.00	7.00'	-1.80%	9.00'	6.50°
	73	MASS AVE	49+23.76	26.76 LT	22.50'	5.00	6.67	0.00%	6.50'	6.50'
**	74	MASS AVE	49+29.23		16.00'	5.00	4.00'	-1.40%	6.50	3.00'
тт	75	MILTON STREET	00+40.00		16.00		4.00	-1.40 <i>/</i> ₀	6.30	3.00
						5.00'				
	76	MILTON STREET	00+41.18	15.13 LT	_	5.00'	4.50'	0.00%	6.50'	6.50'
	77 78	WINDSOR STREET WINDSOR STREET	00+40.57	12.50 LT 13.24 RT	_	5.00'	6.67'	1.60% -0.80%	6.50 ' 7.67 '	9.00'
	1 / 0									
	, 0	WINDSON SINCE	00+30.03	13.24 1(1	_	5.00'	6.00'		7.07	6.50'
	WCR	RAMP REFE	<u>!</u>		WIDTH OF SIDEWALK	WIDTH	LENGTH	ROADWAY		N LENGTH
			<u>!</u>		WIDTH OF				TRANSITIO	
	WCR	RAMP REFE	RENCE POIN	NT	WIDTH OF SIDEWALK	WIDTH OF	LENGTH OF	ROADWAY GUTTER	TRANSITIO	N LENGTH
	WCR #	RAMP REFE BASELINE	RENCE POIN	OFFSET	WIDTH OF SIDEWALK (W)	WIDTH OF RAMP	LENGTH OF RAMP	ROADWAY GUTTER SLOPE	TRANSITIO	N LENGTH RIGHT SIDE
	WCR #	RAMP REFE BASELINE VARNUM STREET	RENCE POIN STATION 00+41.18	OFFSET 15.09 RT	WIDTH OF SIDEWALK (W)	WIDTH OF RAMP 5.00'	LENGTH OF RAMP 4.50'	ROADWAY GUTTER SLOPE 0.50%	TRANSITIO LEFT SIDE 6.50'	N LENGTH RIGHT SIDE 7.67'
	WCR # 79 80	RAMP REFE BASELINE VARNUM STREET VARNUM STREET	STATION 00+41.18 00+39.73	OFFSET 15.09 RT 12.55 LT	WIDTH OF SIDEWALK (W) - -	WIDTH OF RAMP 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00'	ROADWAY GUTTER SLOPE 0.50% -0.60%	TRANSITIO LEFT SIDE 6.50' 7.67'	N LENGTH RIGHT SIDE 7.67' 6.50'
	WCR # 79 80 81	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE	STATION 00+41.18 00+39.73 53+80.31	OFFSET 15.09 RT 12.55 LT 25.00 RT	WIDTH OF SIDEWALK (W) - - 26.00'	WIDTH OF RAMP 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00'
	WCR # 79 80 81 82	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE	STATION 00+41.18 00+39.73 53+80.31 53+80.31	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT	WIDTH OF SIDEWALK (W) - - 26.00'	WIDTH OF RAMP 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50'
	WCR # 79 80 81 82 83	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT	WIDTH OF SIDEWALK (W) - - 26.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00'
	WCR # 79 80 81 82 83 84	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+38.84	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT	WIDTH OF SIDEWALK (W) - - 26.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 6.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 7.67'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50'
	WCR # 79 80 81 82 83 84 85	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+38.84 00+41.51	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT	WIDTH OF SIDEWALK (W) - - 26.00' 16.00' - -	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 4.50'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 9.00'
	WCR # 79 80 81 82 83 84 85 86	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.33 00+38.84 00+41.51 00+40.88	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT	WIDTH OF SIDEWALK (W) ———————————————————————————————————	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 4.50' 4.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 9.00'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 9.00' 6.50'
	WCR # 79 80 81 82 83 84 85 86 87	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+38.84 00+41.51 00+40.88 57+99.03	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT	WIDTH OF SIDEWALK (W) 26.00' 16.00' 16.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 4.50' 4.00' 6.67'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67'
	WCR # 79 80 81 82 83 84 85 86 87 88	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE MASS AVE	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+40.88 57+99.03 58+11.43	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT	WIDTH OF SIDEWALK (W) ———————————————————————————————————	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 4.50' 4.00' 6.67' 8.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 6.50' 9.00' 6.83'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50'
	WCR # 79 80 81 82 83 84 85 86 87 88 89	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE MASS AVE THORNDIKE STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+40.88 57+99.03 58+11.43 00+41.51	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT	WIDTH OF SIDEWALK (W) - - 26.00' 16.00' - - 16.00' 16.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 4.50' 4.00' 6.67' 8.00' 5.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 6.83' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+38.84 00+41.51 00+40.88 57+99.03 58+11.43 00+41.51 00+41.51	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT	WIDTH OF SIDEWALK (W) 26.00' 16.00' 16.00' 16.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 6.00' 4.50' 4.00' 6.67' 8.00' 5.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -0.35%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 6.83' 6.50' 7.67'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+40.88 57+99.03 58+11.43 00+41.51 00+41.24 00+41.28	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT	WIDTH OF SIDEWALK (W) 26.00' 16.00' 16.00' 16.00' 16.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 6.00' 4.50' 4.00' 6.67' 8.00' 5.00' 6.67'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -0.35% -3.00%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 6.83' 6.50' 7.67' 14.00'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 6.50'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+40.88 57+99.03 58+11.43 00+41.51 00+41.24 00+41.28 00+39.37	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.44 RT	WIDTH OF SIDEWALK (W) 26.00' 16.00' 16.00' 16.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 4.00' 4.50' 4.00' 5.00' 5.00' 6.67' 6.67' 6.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% -1.00% 0.30% -1.00% 0.30% -0.35% -3.00% 0.60%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 6.83' 6.50' 7.67' 14.00' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET FAIRMONT STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+38.84 00+41.51 00+40.88 57+99.03 58+11.43 00+41.51 00+41.24 00+41.28 00+39.37 00+39.90	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.44 RT 14.75 RT	WIDTH OF SIDEWALK (W) 26.00' 16.00' 16.00' 16.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 6.00' 4.50' 4.00' 6.67' 8.00' 5.00' 6.67' 6.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -0.35% -3.00% 0.60% 2.40%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 6.83' 6.50' 7.67' 14.00' 6.50' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 11.00'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET FAIRMONT STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+40.88 57+99.03 58+11.43 00+41.51 00+41.24 00+41.24 00+39.37 00+39.37 00+39.90 00+40.66	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.44 RT 14.75 RT 14.64 LT	WIDTH OF SIDEWALK (W) 26.00' 16.00'16.00' 16.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 6.00' 4.50' 4.00' 6.67' 8.00' 5.00' 6.67' 6.00' 5.00' 5.00' 5.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -0.35% -3.00% 0.60% 2.40% 1.70%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 6.83' 6.50' 7.67' 14.00' 6.50' 6.50' 6.50' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 11.00' 9.00'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET FAIRMONT STREET HENDERSON STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+41.51 00+41.51 00+41.51 00+41.24 00+41.24 00+41.24 00+39.37 00+39.90 00+40.66 00+42.61 00+38.16	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.44 RT 14.75 RT 14.64 LT 11.30 LT	WIDTH OF SIDEWALK (W) 26.00' 16.00'16.00' 16.00'	WIDTH OF RAMP 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00' 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 6.00' 4.00' 6.00' 4.50' 4.00' 6.67' 8.00' 5.00' 5.00' 5.00' 5.00' 6.67' 6.00' 6.67' 6.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -0.35% -3.00% 0.60% 2.40% 1.70% -2.00%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 7.67' 14.00' 6.50' 6.50' 9.00' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 11.00' 9.00' 6.50' 6.50' 6.50'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET TEEL STREET FAIRMONT STREET HENDERSON STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+41.51 00+41.51 00+41.51 00+41.24 00+41.24 00+41.24 00+39.37 00+39.90 00+40.66 00+42.61 00+38.16	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.41 LT 12.44 RT 14.75 RT 14.64 LT 11.30 LT 11.23 RT 26.00 LT	WIDTH OF SIDEWALK (W) 26.00' 16.00' 16.00' 16.00'	WIDTH OF RAMP 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 4.00' 4.50' 4.00' 5.00' 5.00' 5.00' 5.00' 5.00' 6.67' 6.67'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -0.35% -3.00% 0.60% 2.40% 1.70% -2.00% 0.00%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 7.67' 14.00' 6.50' 6.50' 9.00' 6.50' 9.00' 9.00'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 11.00' 9.00' 6.50' 6.50' 6.50' 6.50' 6.50'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97	RAMP REFE BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET TEEL STREET FAIRMONT STREET HENDERSON STREET HENDERSON STREET MASS AVE MASS AVE	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+41.51 00+40.88 57+99.03 58+11.43 00+41.51 00+41.24 00+41.24 00+41.28 00+39.37 00+39.37 00+39.90 00+40.66 00+42.61 00+38.16 62+85.69	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.44 RT 14.75 RT 14.64 LT 11.30 LT 11.23 RT 26.00 LT	WIDTH OF SIDEWALK (W) 26.00' 16.00'16.00' 16.00'	WIDTH OF RAMP 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 6.00' 4.00' 4.50' 4.00' 6.67' 8.00' 5.00' 5.00' 5.00' 6.67' 6.00' 6.67' 6.00' 6.67'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% 0.30% -1.00% 0.30% 0.30% -1.00% 0.30% 0.30% 0.30% -1.00% 0.30% 0.30% 0.30% -1.00% 0.30%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 7.67' 14.00' 6.50' 6.50' 9.00' 6.50' 6.50' 9.00' 6.50' 6.50' 9.00' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 11.00' 9.00' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98	BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET TEEL STREET FAIRMONT STREET HENDERSON STREET MASS AVE	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+40.88 57+99.03 58+11.43 00+41.51 00+41.24 00+41.24 00+41.28 00+39.37 00+39.37 00+39.90 00+40.66 00+42.61 00+38.16 62+85.69 62+85.69	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.44 RT 14.75 RT 14.64 LT 11.30 LT 11.23 RT 26.00 LT 24.00 RT	WIDTH OF SIDEWALK (W) 26.00' 16.00' 16.00' 16.00'	WIDTH OF RAMP 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 6.00' 4.00' 6.00' 4.50' 4.00' 6.67' 8.00' 5.00' 5.00' 5.00' 6.67' 6.00' 6.67' 6.00' 7.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.60% 2.40% 1.70% -2.00% 0.00% -1.90% 0.00% 4.60%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 7.67' 14.00' 6.50' 6.50' 9.00' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 11.00' 9.00' 6.50' 6.50' 9.00' 6.50' 9.00'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99	BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET TEEL STREET FAIRMONT STREET FAIRMONT STREET HENDERSON STREET HENDERSON STREET MASS AVE MASS AVE LAFAYETTE STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+41.51 00+41.51 00+41.24 00+41.24 00+41.28 00+39.37 00+39.90 00+40.66 00+42.61 00+38.16 62+85.69 62+85.69 00+37.77	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 LT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.41 LT 12.44 RT 14.75 RT 14.64 LT 11.30 LT 11.30 LT 11.23 RT 26.00 LT 24.00 RT 12.55 RT 12.55 RT	WIDTH OF SIDEWALK (W)	WIDTH OF RAMP 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 4.00' 6.00' 4.50' 4.00' 6.67' 8.00' 5.00' 5.00' 5.00' 6.67' 6.00' 6.67' 6.00' 6.00' 6.00' 6.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -1.00% 0.35% -3.00% -3.00% 0.60% 2.40% 1.70% -2.00% 0.00% -1.90% 0.00% 4.60% 0.00%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 7.67' 14.00' 6.50' 6.50' 9.00' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 11.00' 9.00' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50'
	WCR # 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99	BASELINE VARNUM STREET VARNUM STREET MASS AVE MASS AVE MASS AVE AMSDEN STREET AMSDEN STREET MAGNOLIA STREET MAGNOLIA STREET MAGNOLIA STREET MASS AVE MASS AVE THORNDIKE STREET TEEL STREET TEEL STREET TEEL STREET FAIRMONT STREET FAIRMONT STREET HENDERSON STREET HENDERSON STREET MASS AVE MASS AVE MASS AVE LAFAYETTE STREET LAFAYETTE STREET	STATION 00+41.18 00+39.73 53+80.31 53+80.31 00+41.33 00+41.51 00+41.51 00+41.51 00+41.24 00+41.24 00+41.28 00+39.37 00+39.90 00+40.66 00+42.61 00+38.16 62+85.69 62+85.69 00+37.77 00+39.08	OFFSET 15.09 RT 12.55 LT 25.00 RT 33.00 LT 13.88 LT 13.97 RT 15.44 RT 15.06 LT 33.00 RT 33.00 LT 13.85 RT 14.24 LT 12.41 LT 12.41 LT 12.44 RT 14.75 RT 14.64 LT 11.30 LT 11.30 LT 11.23 RT 26.00 LT 24.00 RT 12.55 RT 12.53 LT 13.80 LT	WIDTH OF SIDEWALK (W) 26.00' 16.00'16.00' 16.00'	WIDTH OF RAMP 5.00'	LENGTH OF RAMP 4.50' 6.00' 6.00' 6.00' 4.00' 6.00' 4.50' 4.00' 6.67' 8.00' 5.00' 5.00' 5.00' 6.67' 6.00' 6.67' 6.00' 7.00'	ROADWAY GUTTER SLOPE 0.50% -0.60% 1.50% -0.70% 1.90% -0.60% 1.90% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.30% -1.00% 0.60% 2.40% 1.70% -2.00% 0.00% -1.90% 0.00% 4.60%	TRANSITIO LEFT SIDE 6.50' 7.67' 6.50' 7.67' 6.50' 9.00' 6.50' 7.67' 14.00' 6.50' 6.50' 9.00' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50' 6.50'	N LENGTH RIGHT SIDE 7.67' 6.50' 9.00' 6.50' 9.00' 6.50' 7.67' 6.50' 7.67' 6.50' 7.67' 11.00' 9.00' 6.50' 6.50' 9.00' 6.50' 9.00'

NOTE:
** SEE WHEELCHAIR RAMP PAIR WITH 3" REVEAL DETAIL THIS SHEET

WARNING PANEL — AREA	CL LANDING A, 1.5% SS SLOPE
RAMP REFERENCE PONT	SIDEWALK
SIDEWALK SIDEWALK	LENGTH VARIES
7.5%*	0' TO 6' 7.5%* 7.5%*
TRANSITION 5'-0" TRANSITION 0" TO 3"	3" REVEAL TRANSITION 5'-0" TRANSITION O" TO 6"

WHEELCHAIR RAMP PAIR WITH 3" REVEAL DETAIL NOT TO SCALE

DRIVEWAY OPENING LAYOUT DATA

				WIDTH OF		50451444
DW	DRIVEWAY REI	FERENCE PO	DINT	WIDTH OF SIDEWALK	WIDTH OF	ROADWAY GUTTER
#	BASELINE	STATION	OFFSET	(W)	DRIVEWAY	SLOPE
1	MASS AVE	12+60.53	32.28 RT	8.00'	10.32'	-1.20
2	MASS AVE	12+90.10	31.39 LT	8.00'	11.00'	-0.50
3	MASS AVE	13+68.96	33.00 RT	8.00'	35.09	-0.40
4	MASS AVE	13+92.55	32.00 LT	8.00'	19.92'	0.60
5	MASS AVE	14+84.17	33.00 RT	8.00'	22.31'	-0.50
6	MASS AVE	15+56.52	33.00 RT	8.00'	30.99	-0.60
7	MASS AVE	18+12.26	33.00 LT	8.00'	14.74	0.50
8	MASS AVE	19+39.68	33.00 RT	8.00'	28.58	-0.80
9	MASS AVE	20+03.98	33.00 RT	8.00'	36.38'	-0.40
10	MASS AVE	20+41.79	33.00 LT	8.00'	19.30'	0.50
11	MASS AVE	20+61.99	33.00 RT	8.00'	38.73'	-0.50
12	MASS AVE	20+97.79	33.00 LT	8.00'	17.13'	1.20
13	MASS AVE	22+18.26	33.00 RT	8.00'	40.21'	-0.80
14	MASS AVE	22+87.65	33.00 RT	8.00'	15.73'	-0.60
15	MASS AVE	23+27.10	33.00 LT	8.00'	18.06'	0.50
16	MASS AVE	23+58.40	33.24 RT	8.00'	19.04	-0.60
17	LINWOOD STREET	01+11.38	12.17 LT	4.54'	11.94'	-2.40
18	MASS AVE	25+17.78	34.00 RT	6.00'	14.03'	0.20
19	MASS AVE	25+17.69	33.00 LT	16.00'	14.80'	0.00
20	MASS AVE	25+45.22	33.00 LT	8.00'	24.79	-0.20
DW	DRIVEWAY REI	FERENCE PO	DINT	WIDTH OF	WIDTH OF	ROADWAY
#		67.7-1-11		SIDEWALK	DRIVEWAY	GUTTER
	BASELINE	STATION	OFFSET	(W)		SLOPE
21	MASS AVE	26+39.68	33.00 LT	8.00'	29.31'	-0.20
22	MASS AVE	26+53.27	34.00 RT	6.00'	8.94'	0.70
23	MASS AVE	27+07.25	34.00 RT	6.00'	14.81	0.20
24	MASS AVE	27+78.61	34.00 RT	6.00'	12.96'	-0.70
25	MASS AVE	28+34.90	34.00 RT	6.00'	16.40'	0.70
26	BATES ROAD	01+08.45	23.00 RT	4.67'	23.26'	-0.70
27	MASS AVE	30+35.16	33.00 LT	8.00'	15.93'	-0.50
28	MASS AVE	30+89.19	33.00 LT	8.00'	12.00'	-0.30
29	MASS AVE	33+46.29	33.00 LT	8.00'	15.40'	0.00
30	MASS AVE	33+93.35	34.00 RT	6.00'	15.90'	0.40
31	MASS AVE	35+24.24	34.00 RT	6.00'	10.91'	-0.20
32	MASS AVE	35+90.35	33.00 LT	8.00'	34.10'	0.60
33	GRAFTON STREET	01+51.26	29.89 LT	5.00'	18.13'	0.40
34	MASS AVE	38+01.61	34.00 RT	8.00'	15.88'	-0.70
35	MASS AVE	38+69.82	34.00 RT	8.00'	18.02'	-0.50
36	MASS AVE	39+45.19	34.00 RT	8.00'	15.59'	-0.10
37 38	MASS AVE MASS AVE	40+14.84 40+37.82	34.00 RT 34.00 LT	8.00' 8.00'	16.99' 13.04'	-0.60
39	MASS AVE MASS AVE	40+37.82				1 11 77/1
40		I 4 ()		1 0 00'		0.20
70	M V C C V //E		34.41 RT	8.00'	30.71	1.10
5,47	MASS AVE	41+08.33	36.85 LT	8.00'	30.71'	1.10 -1.10
DW µ	MASS AVE DRIVEWAY REI	41+08.33	36.85 LT		30.71' 18.50' WIDTH OF	1.10
DW #		41+08.33	36.85 LT	8.00' WIDTH OF	30.71'	1.10 -1.10 ROADWAY
	DRIVEWAY REI	41+08.33 ERENCE PO	36.85 LT DINT	8.00' WIDTH OF SIDEWALK (W)	30.71' 18.50' WIDTH OF DRIVEWAY	1.10 -1.10 ROADWAY GUTTER
#	DRIVEWAY REI BASELINE	41+08.33 FERENCE PO STATION	36.85 LT DINT OFFSET	8.00' WIDTH OF SIDEWALK	30.71' 18.50' WIDTH OF	1.10 -1.10 ROADWAY GUTTER SLOPE
# 41	DRIVEWAY REI BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89	36.85 LT DINT OFFSET 33.00 LT	8.00' WIDTH OF SIDEWALK (W) 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70
# 41 42	DRIVEWAY REI BASELINE MASS AVE MASS AVE	41+08.33 FERENCE PO STATION 48+92.89 49+53.09	36.85 LT DINT OFFSET 33.00 LT 33.00 LT	8.00' WIDTH OF SIDEWALK (W) 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20
# 41 42 43	DRIVEWAY REI BASELINE MASS AVE MASS AVE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 LT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70
# 41 42 43 44	DRIVEWAY REI BASELINE MASS AVE MASS AVE MASS AVE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70
# 41 42 43 44 45	DRIVEWAY REI BASELINE MASS AVE MASS AVE MASS AVE MASS AVE MASS AVE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80
# 41 42 43 44 45 46	DRIVEWAY REI BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50
# 41 42 43 44 45 46 47 48 49	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 LT 33.00 LT 33.00 LT 33.00 LT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70
# 41 42 43 44 45 46 47 48 49 50	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 LT 33.00 LT 33.00 LT 33.00 RT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 16.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60
# 41 42 43 44 45 46 47 48 49 50 51	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 LT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30
# 41 42 43 44 45 46 47 48 49 50 51 52	DRIVEWAY REI BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70
# 41 42 43 44 45 46 47 48 49 50 51 52 53	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50 59+49.63	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 RT 33.00 RT 33.00 RT 33.00 LT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13' 11.53'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70 -0.50
# 41 42 43 44 45 46 47 48 49 50 51 52 53 54	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50 59+49.63 59+87.81	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 RT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13' 11.53' 11.82'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70 -0.50 1.70
# 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50 59+49.63 59+87.81 60+41.44	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 LT 33.00 RT 33.00 LT 33.00 RT 33.00 RT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13' 11.53' 11.82' 10.86'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70 -0.50 1.70 -1.20
# 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50 59+49.63 59+87.81 60+41.44 61+34.10	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 LT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 8.00' 16.00' 8.00' 8.00' 8.00' 11.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13' 11.53' 11.82' 10.86' 14.71'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70 -0.50 1.70 -1.20 1.80
# 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50 59+49.63 59+87.81 60+41.44 61+34.10 61+98.99	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 LT 33.00 RT 33.00 LT 33.00 RT 33.00 LT 33.00 LT 33.00 LT 33.00 LT	8.00' WIDTH OF SIDEWALK (W) 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13' 11.53' 11.82' 10.86' 14.71' 10.38'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70 -0.50 1.70 -1.20 1.80 -1.10
# 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50 59+49.63 59+87.81 60+41.44 61+34.10 61+98.99 62+33.30	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 LT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 11.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13' 11.53' 11.82' 10.86' 14.71' 10.38' 13.05'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70 -0.50 1.70 -1.20 1.80 -1.10 1.80
# 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59	BASELINE MASS AVE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50 59+49.63 59+87.81 60+41.44 61+34.10 61+98.99 62+33.30 63+74.75	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 RT 33.00 RT 33.00 RT 33.00 LT 33.00 RT 33.00 LT 33.00 RT 33.00 LT 33.00 RT 33.00 LT 33.00 RT 33.00 RT 33.00 RT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13' 11.53' 11.82' 10.86' 14.71' 10.38' 13.05' 24.84'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70 -0.50 1.70 -1.20 1.80 -1.10 1.80 -1.60
# 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	BASELINE MASS AVE	41+08.33 ERENCE PO STATION 48+92.89 49+53.09 51+61.68 52+07.91 52+64.52 54+62.78 56+38.76 56+90.93 57+13.28 57+77.03 57+94.87 59+40.50 59+49.63 59+87.81 60+41.44 61+34.10 61+98.99 62+33.30	36.85 LT DINT OFFSET 33.00 LT 33.00 LT 33.00 RT 33.00 RT 33.00 LT 33.00 RT	8.00' WIDTH OF SIDEWALK (W) 8.00' 11.00'	30.71' 18.50' WIDTH OF DRIVEWAY 19.94' 16.86' 12.62' 17.73' 14.11' 11.28' 11.78' 21.65' 34.65' 19.66' 10.47' 11.13' 11.53' 11.82' 10.86' 14.71' 10.38' 13.05'	1.10 -1.10 ROADWAY GUTTER SLOPE -0.70 -0.20 -1.70 0.70 0.80 0.70 -1.30 -0.50 0.70 0.60 0.30 1.70 -0.50 1.70 -1.20 1.80 -1.10 1.80

NOTES:

1. ADA/MA AAB REQUIREMENTS SHALL BE FOLLOWED.

2. * = TOLERANCE FOR CONSTRUCTION = $0.5\%\pm$

CEM CONC SIDE WALK T.5%* CEM CONC SIDE WALK T.5%* CEM CONC SIDE WALK T.5%* CEM CONC SIDE WALK GRAN CURB T.5%* CONCRETE CURB CORNER - TYPE A (TYP)

ARLINGTON
MASSACHUSETTS AVENUE - ROUTE 2A/3

STATE FED. AID PROJ. NO. SHEETS NO. SHEETS

PROJECT FILE NO. 604687

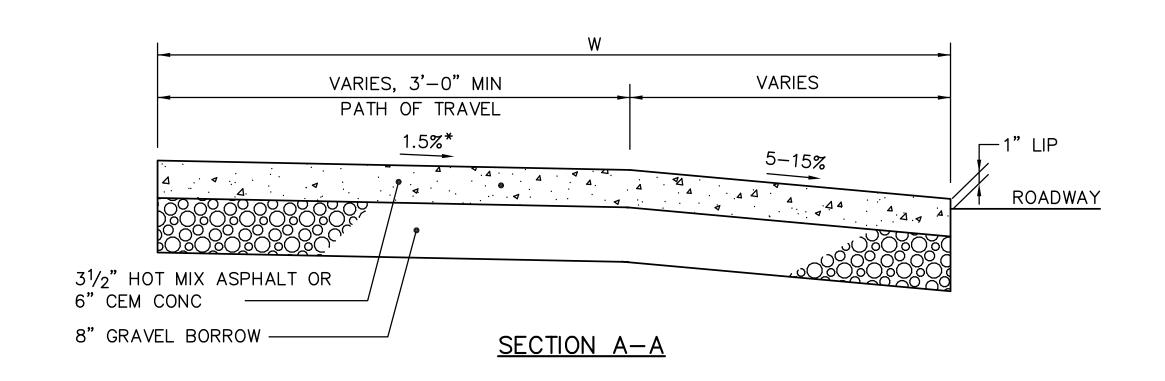
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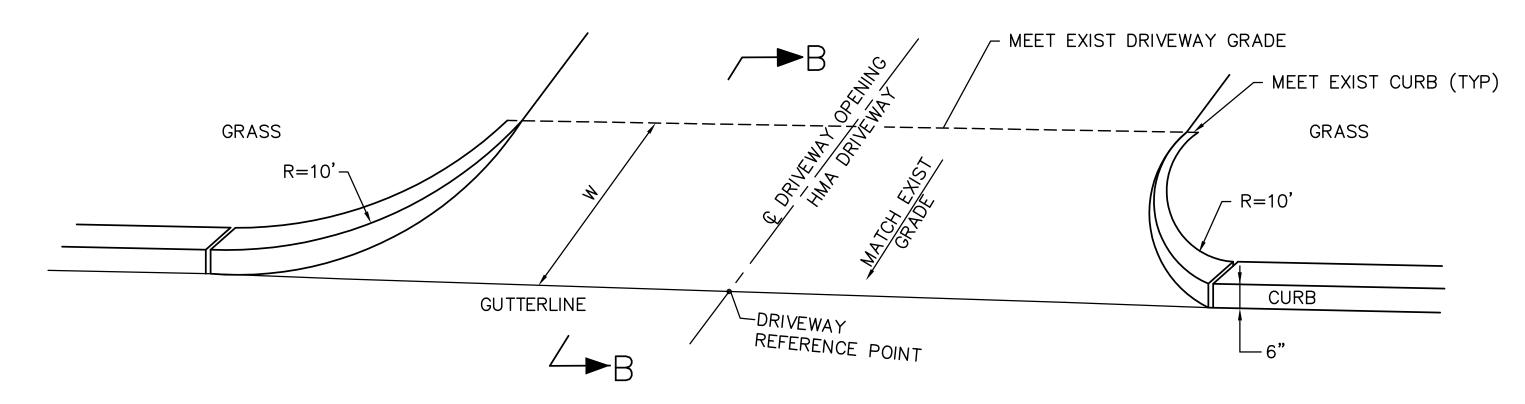
DRIVEWAY DETAILS

PART 3 OF 3

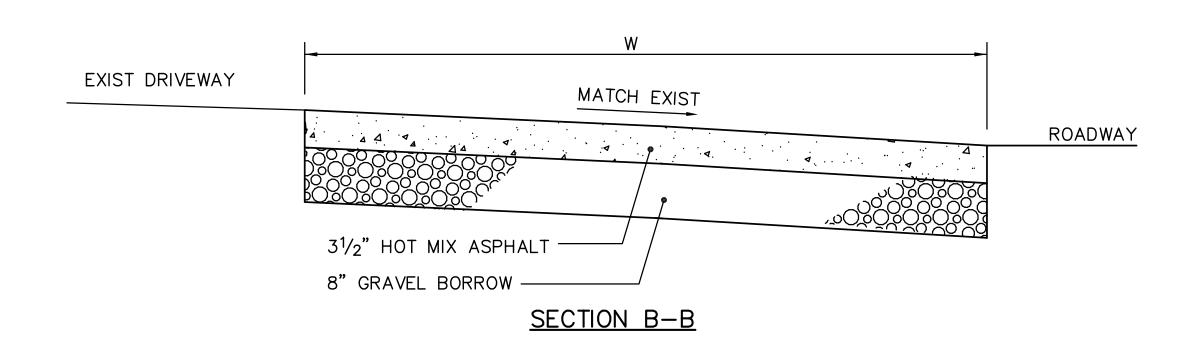
114 164

DRIVEWAY OPENING AT SIDEWALK NOT TO SCALE





DRIVEWAY OPENING (NO SIDEWALK)
NOT TO SCALE



FS&T DWG. NO.

QA-013

ES BTR CHK JMM

DR MJC CHK JMM

